ALHUSAYNI, FAISAL A., Ph.D. A Qualitative Study of RTI/Multi-tiered Instruction in Reading and LD Identification from Educators' Perspectives through the Lens of Implementation Science. (2016)
Directed by Dr. William D. Bursuck. 257 pp.

Response to Intervention (RTI) represents a promising approach for producing more positive student achievement outcomes for all students, including students with special needs, while at the same time solving the chronic problem of over-identifying students as having Learning Disabilities (LD) in reading. Nonetheless, the issue of how to implement RTI with fidelity and sustainability remains necessary and important. One key source of knowledge about implementing RTI is educators who have had experience implementing this approach. While a number of studies have examined RTI implementation from the perspective of educators, the studies have for the most part been limited to educators who have implemented RTI for only one year, and have not included a wide range of educators involved in the research.

The goal of this study was to better understand and clarify issues related to the implementation of RTI and LD identification by examining the perspectives of a variety of educators who have worked at a school that has been involved in implementing RTI for three years. A major contribution of this study is that it is the only study examining educator perspectives of the RTI process while collecting fidelity of implementation data. Implementation issues were examined through the lens of *Implementation Science*, an empirically validated model for implementing Evidence-based Practices (EBPs). The data sources included interviews, classroom and RTI team meeting observations, and students' achievement data. The study found that while RTI was generally implemented with

fidelity, the extent to which the *Implementation Science* model was followed varied. The implications of the findings for RTI implementation and student-related outcomes, such as reading achievement and LD identification, as well as implications for future practice and research are discussed.

A QUALITATIVE STUDY OF RTI/MULTI-TIERED INSTRUCTION IN READING AND LD IDENTIFICATION FROM EDUCATORS' PERSPECTIVES THROUGH THE LENS OF IMPLEMENTATION SCIENCE

by

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A Dissertation Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
2016

Approved by

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This dissertation is dedicated to my father, Alashal F. Alhusayni, and my mother, Fareda S. Alshamari, who had faith in me and who made me who I am. It is also dedicated to my lovely wife, Noura Abothneen, and my son, Abdullah “Dodi” Alhusayni, who encouraged me to achieve my dream. Dodi, Daddy finally finished his homework!

APPROVAL PAGE

This dissertation, written by Faisal A. Alhusayni, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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June 29, 2016
Date of Acceptance by Committee

June 29, 2016
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ACKNOWLEDGMENTS

I want to begin by thanking my doctoral committee: Dr. William Bursuck, I was honored that you took on the role of chair of my committee for the duration of my doctoral studies, which made me feel you are my academic father. Dr. Stephanie Kurtts, thank you for your encouragement, as well as your valuable and insightful feedback. You made me proud when you said that my work was one of the best you had ever seen. Dr. Teresa Little, without your help, I would not have had a school that met my research criteria and I really appreciate your ongoing support throughout my struggle. Dr. Craig Peck, your contributions to my work based on your knowledge about educational leadership in the U.S. was vital to accomplish the goal of this project. I am proud of having this unique group of faculty members as my doctoral studies committee throughout my six years at UNCG.

Dr. Marilyn Friend, former president of the Council for Exceptional Children (CEC), I am proud that my first class in the SES department at UNCG was with you. Thank you for your faith in me, I followed your directions until the end. Dr. Dean Fixsen, the creator of Implementation Science, thank you for your valuable input on my project based on your amazing Implementation Science model. I am really proud of having your support and encouragement. Dr. Tammy Barron, thank you for your help and ongoing support. You are more than just my best classmate ever; you are my academic sister. Yacine, thank you for helping me with the data analysis process and sharing your valuable experience as an educator in U.S. Casey, you were there whenever I needed you

to complete this project. You are the best editor that I have worked with. Lastly, thank you to my friends and family, who supported me not only academically, but also physically, emotionally, and spiritually through this process. I love you all and I am proud to earn my Ph.D. from UNCG.

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CHAPTER I

INTRODUCTION

The learning disabilities (LD) category has become the largest receiving special education services (SES) under the Individuals with Disabilities Education Act (IDEA) of 2004 (Aud et al., 2010; Cortiella & Horowitz, 2014; Zirkel, 2010). Although in recent years the number of students identified as having LD has declined annually by approximately 2%, the most recent federal data published (i.e., 2011) showed that students with LD still represent 42% of students receiving SES under IDEA (U.S. Department of Education, 2011b), leading some researchers to believe that they are over-identified (Cortiella & Horowitz, 2014).

The issue of the over-identification of students having LD has been mentioned as one of the critical concerns in the field of SES by many researchers (Cortiella & Horowitz, 2014; Flanagan, Ortiz, Alfonso, & Dynda, 2006; McKenzie, 2009; Zirkel, 2010). Thus, both policymakers and researchers have attempted to address the issues related to defining LD and identifying students with LD to determine the reasons why they are identified in such great numbers. A number of researchers have set a goal to more accurately identify students who need SES services (i.e., LD; Balu, Zhu, Doolittle, Schiller, Jenkins, & Gersten, 2015; Printy & Williams, 2015; Zirkel, 2011), while decreasing the percentage of students misidentified as having LD (i.e., false positives) (Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Fuchs, Fuchs, & Compton, 2012).

Throughout the researcher's professional experience as a special education teacher of students with LD, he dealt with the issue of over-identification of students as having LD in the researcher's home country of Saudi Arabia. Having the chance to study in three different countries (i.e., Saudi Arabia, Jordan, and United States) made him realize that the over-identification of students with LD in reading seems to be a global issue, especially in countries that use both the definition of LD and the identification processes developed in the United States (e.g., Saudi Arabia and Jordan). Meanwhile, many researchers have attributed the high number of students identified with LD as due to two factors: (1) the shortcomings of using the discrepancy between intelligence and achievement (i.e., IQ-achievement discrepancy) as the main criterion to identify and determine eligibility of students as having LD, and (2) the ambiguity of the federal definition of LD (Cortiella & Horowitz, 2014; Flanagan et al., 2006; Fuchs & Deshler, 2007; McKenzie, 2009). Other researchers have argued that the rise in the percentage of students identified as having LD is linked to lack of the effective use of pre-referral interventions in general education (Burns, Jacob, & Wagner, 2008; Cortiella & Horowitz, 2014; Flanagan et al., 2006).

Due to the aforementioned long-term criticisms of the use of traditional identification criteria for LD, the 2004 reauthorization of IDEA introduced a new approach called response to intervention (RTI) as an alternative/optional identification procedure of LD, and in 2006 the IDEA encouraged states across the nation to develop new strategies/criteria to identify students with LD (Cortiella & Horowitz, 2014; Printy & Williams, 2015). Thus, many states began to use RTI for identifying students as having

LD instead of using the IQ-achievement discrepancy (Cortiella & Horowitz, 2014; Zirkel, 2010). Implicit in the law was the belief that the early identification, early intervention features of RTI would reduce LD numbers by improving reading instruction in general education classrooms (Cortiella & Horowitz, 2014; Printy & Williams, 2015).

IDEA allowed schools to use 15% of their special education budget per year in order to encourage schools to establish early academic intervention services in general education classrooms (Burns et al., 2008; Cortiella & Horowitz, 2014; Fuchs & Deshler, 2007; Johnston, 2010; Printy & Williams, 2015). As a result, RTI had been increasingly employed in many school distract across the country, Sparks (2015) most recently estimating that 70% of the school districts nationwide are implementing RTI. Despite its potential benefits and increasing usage, implementation of RTI can be challenging, since it requires tremendous effort either at the school level (Fuchs & Vaughn, 2012; Printy & Williams, 2015) or in the district and state level (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). As several researchers have noted, clear definitions of terms included in the SES laws (e.g., IDEA) are lacking, and there is considerable ambiguity as to what scientifically-based assessment and instructional approaches connote (Burns et al., 2008; Printy & Williams, 2015).

For example, it is unclear in the law exactly how to implement a multi-tiered instructional approach, leading to the fact that there are quite different ones currently in use in RTI (Kerins, Trotter, & Schoenbrodt, 2010; E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015; Zirkel, 2011). Therefore, the goal of this study is to clarify confusion surrounding the implementation of RTI by studying its implementation from

the perspective of a broad swath of educators who have been involved in its implementation for three years including general education teachers (GETs), special education teacher (SET), administrator, as well as other support staff, such as curriculum coordinator/literacy reading coach (CC/LC), psychologist, speech/language pathologist (SLP), and counselor. Educators' perspectives are interpreted through the lens of the conceptual framework of this study; namely Implementation Science (Fixsen, Blase, Metz, & Dyke, 2013; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005).

Rationale for Proposed Research

Recently, researchers have strongly recommended applying Implementation Science as a scientific strategy to close the gap between research and practice in the field of SES (Cook & Odom, 2013; Fixsen et al., 2013). Implementation Science is defined as science that "uses common frameworks, principles, and best practices to study and improve implementation of evidence-based or evidence-informed practices in the real world" (Halle, 2012, p. 4). While Implementation Science is a potentially effective scientific method of closing the gap between research and practice, it can be also used to identify gaps in the implementation process with the goal of implementing evidence-based practices (EBPs) effectively, with fidelity and sustainability, to reach the expected outcomes (Cook & Odom, 2013; Fixsen et al., 2013, 2005; Halle, 2012).

The core implementation components for successful implementation of EBPs, in the case of this study, RTI, and the dynamics involved in employing an effective implementation process include seven critical ongoing phases: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program

evaluation, (f) facilitated administrative supports, and (g) system intervention (Fixsen et al., 2013, 2005). Each of these core components and the dynamics between them is described in more detail in Chapter II and V (see Figure 4 in Chapter II). The framework of Implementation Science is used to study implementation of the critical components of RTI as described by Fuchs and Fuchs (2007). These six critical components include: (a) three tiers of intervention using EBPs; (b) universal screening and progress monitoring; (c) data-based decision-making; (d) criteria to determine students who are unresponsive; (e) multidisciplinary evaluation; and (f) special education, as described in more detail in Chapter II (see Figure 1 in Chapter II). The successful implementation of each of these components is critical to the successful implementation of RTI (Fuchs & Fuchs, 2007).

It is hoped that by considering educators' perspectives regarding RTI implementation within the framework of Implementation Science can help guide the field to better understand and implement RTI appropriately and comprehensively with a high level of fidelity and sustainability (Fixsen et al., 2013, 2005; Fuchs & Fuchs, 2007). Indeed, educators' perspectives regarding the implementation of new school reform such as RTI are rarely studied (Donnell & Gettinger, 2015; Printy & Williams, 2015) whereas, their perspectives can provide schools' administrators, researchers, and policymakers with insights about the effectiveness of school reform in general and RTI particularly (Darling-Hammond, 2009; Greenfield, Rinaldi, Proctor, & Cardarelli, 2010; Printy & Williams, 2015).

Additionally, considering educators' perspectives can also potentially influence positively the acceptance, feelings, and commitments of educators toward the

implementation of RTI, ultimately influencing, we hope, both the fidelity and sustainability of appropriate implementation (Denton, Vaughn, & Fletcher, 2003; Donnell & Gettinger, 2015; Fixsen et al., 2013, 2005). This is in contrast to traditional education research in which educators are either mostly viewed as participants/resources for others (e.g., researchers) when implementing academic/behavioral interventions (Pavri, 2010) or ignored/excluded from the discussion of new school reform initiatives (e.g., RTI; Donnell & Gettinger, 2015).

Statement of the Problem

As stated previously, RTI is being employed increasingly in schools nationwide in an attempt to reduce the numbers of students identified with LD through the use of EBPs as early identification and intervention reading strategies (Cortiella & Horowitz, 2014; Sparks, 2015). RTI is also being used as a general school strategy to decrease the number of struggling readers, and by so doing, narrow the schools' chronic achievement gap (Balu et al., 2015; Cortiella & Horowitz, 2014). Nonetheless, there is evidence that RTI implementation can be challenging (Fuchs & Vaughn, 2012; E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). One potentially valuable source of information for helping schools implement RTI is educators who have implemented it themselves (Donnell & Gettinger, 2015; Fixsen et al., 2005; Printy & Williams, 2015).

Despite the perceived importance of considering educators' perspectives only seven studies found have examined the implementation of RTI in this way (e.g., Greenfield et al., 2010; Pavri, 2010; Printy & Williams, 2015; Pyle, Wade-Woolley, & Hutchinson, 2011; Rinaldi, Averill, & Stuart, 2011; Robinson, Bursuck, & Sinclair, 2013;

Sansosti, Goss, & Noltemeyer, 2011). Further, five of these studies were conducted during the initial year of RTI implementation (i.e., Greenfield et al., 2010; Pavri, 2010; Pyle et al., 2011; Robinson et al., 2013; Sansosti et al., 2011), whereas only two studies were done after three years (i.e., Printy & Williams, 2015; Rinaldi et al., 2011). However, none of the seven studies examined RTI implementation from the perspectives of a sample of all the educators involved including teachers (e.g., GETs and SET) administrators (i.e., principals) and non-teaching staff (i.e., CC/LC, psychologist, SLP, and counselor).

Purpose of the Study

Traditional educational research has tended to recommend practices and procedures to for educators to implement without taking into account the perspectives of educators with previous implementation experience (Donnell & Gettinger, 2015; Pavri, 2010). The true potential of school reform effort (e.g., RTI) cannot be reached without better understanding of its implementation through the eyes of variety of educators involved in its implementation, and for longer periods of time (e.g., three years). It is this understanding that comprises the purpose of this study. The research questions are:

1. According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention?

2. To what extent is the school implementing RTI with fidelity and sustainability?

Definition of Key Terms

The following key terms will be used throughout this study. They are briefly defined below.

At-risk (AR) refers to students who are at-risk of academic failure due to any number of factors, particularly poverty and a lack of strong support for educational foundations at home (Bursuck & Damer, 2015; Cortiella & Horowitz, 2014).

Data-based decision making uses data from universal screening and progress monitoring (both defined below) to make decisions about student performance and progress (Bursuck & Damer, 2015; Yell, 2012).

Dynamic Indicator of Early Literacy Skills (DIBELS) is a valid and reliable formative assessment that can be easily conducted by educators to determine whether the student is performing at benchmark at each benchmark period (i.e., beginning of year, middle of year, end of the year) primarily in, the areas of phonemic awareness, phonics and fluency. While DIBELS does have comprehension subtests, these were not used in the school in question in this study. The DIBELS is used for universal screening and progress monitoring to track the performance of individual students in at each benchmark (i.e., well below benchmark, below benchmark, and benchmark; Bursuck & Damer, 2015).

English as a Second Language (ESL) are services provided by schools (e.g., SLP) for ELL students whose primary language is not English. The students that are qualified

for ESL services are mostly pulled-out of the general education classroom and provided with English language instruction appropriate for their level in order to catch them up with their peers. Sometimes ELL students receive ESL services within the general education setting provided with small groups of students who share similar needs by either the GETs or teacher assistants (Escamilla, 2007; Haager, Klingner, & Aceves, 2010).

English Language Learners (ELLs) are students whose first language is not English and are therefore learning English as a second language while they are in public schools in the United States learning alongside native English-speaking peers. This group of students represents about 10% of the student school population in the United States. For most ELL students in the United States public school system, their primary language at home is Spanish (Getting Smart, Lathram, Schneider, & Vander, 2016). In general, teaching reading to ELLs is more challenging, and ELLs are often mistakenly identified as having special needs and receive SES, even though their primary problem is English proficiency (Bursuck & Damer, 2015; Haager et al., 2010).

Evidence-based practices (EBPs) are practices/programs that are shown to have meaningful impact on students' performance based on high-quality research that has met specific standard and guidelines (e.g., research design, quantity, and quality; Cook & Odom, 2013; Fixsen et al., 2013, 2005; Horner et al., 2005).

Highly-qualified teachers are teachers who hold at least a bachelor's degree, are fully licensed by the state in which they teach, and can demonstrate content knowledge (Yell, 2012).

Individualized Education Program (IEP) is a federally-mandated document that is required for all students receiving SES and related services. The IEP must be designed by a team of educators to address the specific needs of each student and include goals and instructional strategies that would be used to reach each goal. The parents should be involved in the design of the IEP and their permission is required for their child's IEP to be implemented. As required by federal law, each student who receives SES must have an IEP that has all the information regarding his performance along with a detailed description of his specific needs as part of his folder and SES program at the school (Cortiella & Horowitz, 2014; U.S. Department of Education, 2011a).

Intervention Support Team (IST) is comprised of teachers and staff from a variety of disciplines such as GETs, SET, psychologist, SLP, and school counselor, and is conducted weekly in order to discuss students who are not making progress as part of a Tier 2 intervention already documented in their personalized education program (PEP). The IST has two decision options: whether (1) to develop another round of intensive, small-group or one-to-one interventions as part of Tier 2 or (2) refer the student for more psychological testing and make a decision as to whether or not the student qualifies for SES (North Carolina State Board of Education, 2016)

IQ-achievement discrepancy model is the traditional "wait to fail" model used by schools to determine if a student is eligible for special education services; students are given a criterion-based test, and scores are compared to results on an IQ test. A major gap between the two results has traditionally been used to identify a student as having LD

(i.e., at least a 15-point discrepancy between the student's ability and achievement scores; Cortiella & Horowitz, 2014; Vaughn & Fuchs, 2006; Yell, 2012).

Learning disabilities (LD) are defined in IDEA (2004) as

> a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Disorders include such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Disorders do not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbances, or of any environmental, cultural, or economic disadvantage. (U.S. Department of Education, 2011b).

Personalized Education Program (PEP) is developed when a classroom teacher recognizes that a student is struggling to perform at grade level and is at-risk of academic failure. The student may be identified as not progressing by a variety of factors, including grades, observation, and formal evaluations (i.e., DIBELS and Text Reading and Comprehension [TRC]; North Carolina State Board of Education, 2015).

Professional learning teams (PLT) are a meeting where a group of educators, such as GETs, SET, ESL, and CC/LC meets weekly to review students' performance and discuss instructional needs and interventions that could be used to help at-risk students to catch up and perform at their grade level (Jolly, 2008). The PLT reviews each student's PEP and tracks their progress, ultimately deciding whether or not they need to be moved to more intensive instruction.

Progress monitoring refers to formative assessments of similar difficulty used in universal screening to gauge student progress within and among the tiers in a multi-tiered intervention (Bursuck & Damer, 2015; Printy & Williams, 2015; Yell, 2012).

Response to intervention (RTI) is a systematic prevention-based intervention used to identify and respond to students' needs, especially those who are struggling academically (Bryant & Barrera, 2009). Based on IDEA (2004), the two main goals of RTI are to provide: (1) an alternative means of identifying students with LD instead of using the historical IQ-achievement discrepancy, and (2) a prevention-based multi-tiered approach to reduce the percentage of students who experience serious reading problems (Cortiella & Horowitz, 2014; Johnston, 2010; Printy & Williams, 2015; Vaughn & Fuchs, 2006; Yell, 2012; Zirkel, 2010).

Teacher Incentive Fund (TIF) is a federal program designed to provide funds for projects that provide the support needed to enhance and sustain effective educators in high-need schools as well as increase student access to educators who are effective and help such educators and other personnel to be successful in their roles (U.S. Department of Education, 2016).

Text Reading and Comprehension (TRC) is a measure that assesses English reading comprehension for children in grades K-6. TRC is a valid and reliable formative test based on proficiency levels, with which educators can monitor their students' progress vis-à-vis proficiency levels, and determine whether the student is performing far below proficient, below proficient, proficient, and above proficient in reading comprehension for their grade level (Amplify, 2014).

Universal screening, often referred to as benchmark tests, are criterion-based measures administered to all students, usually in the general education classroom. These tests are often given at the beginning, middle, and end of the school year and are used to identify students who need additional support (i.e., well below benchmark, below benchmark, and benchmark) (Bursuck & Damer, 2015; Printy & Williams, 2015).

Summary

Despite its usage as a service delivery system nationwide, there is a gap in the literature regarding potentially effective ways to implement the EBPs that embody RTI. Educators can help bridge that gap as they comprise an important part of the implementation process. This study will attempt to close the research-to-practice gap by understanding RTI as a phenomenon from the perspective of variety of educators (i.e., GETs, SET, CC/LC, psychologist, SLP, counselor, and school principal) who have implemented RTI in reading in grades K-2 for three years.

The following chapter presents an overview of the literature regarding the use of RTI in reading in elementary grades including a review of the literature examining RTI from the perspective of educators implementing it. Chapter III will describe the methodology used in this study along with procedures for data collection and analysis. Chapter IV will present the results of the study, followed by Chapter V in which the findings are discussed as they relate to the research literature, as well as their implications for current practice and future research, followed by the limitations then summary of the study.

CHAPTER II

REVIEW OF THE LITERATURE

Over the past three decades, prior to the reauthorization of the Individuals with Disabilities Education Act (IDEA, 2004), the overall percentage of students receiving Special Education Services (SES) under IDEA 2004 had increased from 8.3 to 13.8% (Snyder & Dillow, 2012), with the largest increase being in the category of students identified as having Learning Disabilities (LD) (Aud et al., 2010; Cortiella & Horowitz, 2014; Zirkel, 2010). Eighty percent of the students identified with LD had reading disabilities (Fuchs & Fuchs, 2006). The most recent data regarding students who received SES under IDEA showed that 42% of all students identified had LD (Cortiella & Horowitz, 2014; U.S. Department of Education, 2011). The high number of students identified with LD is commonly viewed as a problem with over-identification (Wanzek & Vaughn, 2011), leading policymakers and researchers to seek causes that have led to this situation with the eventual aim of reducing the number of students identified with LD (Cortiella & Horowitz, 2014). Some researchers have attributed the rise in the number of students being identified as LD to factors such as ambiguities in understanding LD definitions, the shortcomings of traditional diagnostic criteria for LD (i.e., using the IQ-achievement discrepancy as a criterion for identifying students with LD), and the lack of a system of prevention-based, empirically-validated early interventions (Cortiella & Horowitz, 2014; Flanagan et al., 2006; McKenzie, 2009; Zirkel, 2010).

Therefore, in response to these problems, the 2004 reauthorization of IDEA introduced Response to Intervention (RTI) as an alternative/optional identification strategy to identify students as having LD (Cortiella & Horowitz, 2014; Printy & Williams, 2015). As a result, several states had developed and included RTI for identifying students with LD (Cortiella & Horowitz, 2014; Zirkel, 2010) and currently 70% of the school districts across the country are using RTI as a means of identification of LD and/or a prevention-based model of reading instruction (Sparks, 2015). RTI stresses the prevention of reading problems through the delivery of a multi-tiered system of instruction that emphasizes early identification, evidence-based reading practices, and data-based decision making, with the overall intention of also decreasing the number of students identified with LD (Cortiella & Horowitz, 2014; Johnston, 2010; Printy & Williams, 2015; Vaughn & Fuchs, 2006).

Although the IDEA (2004) did not intend for RTI to be used in certain grades or subjects, most of the published studies were conducted in reading with students in grade 6 or below (Balu et al., 2015, Compton et al., 2012; Fuchs & Deshler, 2007). This emphasis on reading is likely due to the fact that 68% of America's students in public schools cannot read at their grade level (Children's Defense Fund, 2010). Plus, a significant 80% of students identified with LD have reading problems (Fuchs & Fuchs, 2006). Thus, it was felt that providing students with effective reading instruction early, as a part of RTI, could reduce their academic failure as well as the resulting risk of being referred to SES and identified as students with LD (Bursuck et al., 2004; Cortiella & Horowitz, 2014). This chapter will thus focus on RTI in reading with students in grade K-

6. The chapter first focuses on students with LD and the potential problems of LD definitions and the traditional identification processes. The chapter then addresses RTI, its purpose, components, and its benefits as a means of identifying students with LD and as an early intervention approach that might prevent students who are struggling or at-risk from being identified as having LD by improving their reading skills.

Finally, as with all research-based practices, the critical link between research and practice is the educators. Indeed, RTI needs to be carried out with fidelity by educators in order to reach its true potential. Although several published studies (e.g., Cummings, Atkins, Allison, & Cole, 2008; Fuchs & Deshler, 2007; Fuchs, Fuchs, et al., 2012; Fuchs & Vaughn, 2012) have provided suggestions regarding the roles of educators when implementing RTI, the voices of educators are often ignored in favor of suggestions provided by researchers (Donnell & Gettinger, 2015; Printy & Williams, 2015; VanDerHeyden, Witt, & Gilbertson, 2007). Seeking the input of educators is particularly important in view of the fact that researchers are still in the process of clarifying the main goals of RTI (Balu et al., 2015; Vaughn & Fuchs, 2006; Fuchs & Deshler, 2007), its most critical components (Kerins et al., 2010; Sparks, 2015), and the way in which it should be implemented (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015; Vaughn & Fuchs, 2006; Zirkel, 2011). Therefore, the final section of the review will focus on the importance of taking educators' views into account when implementing RTI, the purpose of this study.

Problems with Traditional Process of Identifying Students with LD

Due to the lack of consensus on common language among experts, scholars, and practitioners who are interested in the field of LD, the category of LD has suffered from several definitional problems, including the use of varying definitions across the nation and ambiguity regarding the same definitions (Cortiella & Horowitz; 2014; Flanagan et al., 2006). To illustrate, the most common definition of LD that has been used by the majority of states is the formal federal definition as part of the IDEA (2004; Kavale & Forness, 2000; McKenzie, 2009). This definition states:

> (a) General - The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations; (b) Disorders included - Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia; (c) Disorders not included - The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbances, or of any environmental, cultural, or economic disadvantage (U.S. Department of Education, 2011b).

Many researchers have expressed concern that the formal federal definition cannot be used to clearly answer questions such as: what is LD? Why are the majority of students identified with LD in reading and not in other academic skill areas? Rather, the formal federal definition provides vague descriptions of specific conditions with no explicit conceptualization of the category of LD (Cortiella & Horowitz, 2014; Kavale & Forness, 2000). Although researchers have also disagreed on operational definitions in their studies, some common components of the LD definition do exist (e.g., academic

deficit, intact intellectual ability, underachievement, and pre-referral intervention). However, some significant differences have appeared in the LD literature, particularly about identifying and determining eligibility for LD based on the common components of the definition. In fact, the LD literature has included much discussion and debate about the shortcomings and ambiguities of its definitions and how to assess its components instead of providing a better understanding of this disability (e.g., Cortiella & Horowitz, 2014; Flanagan et al., 2006; Kavale & Forness, 2000; McKenzie, 2009).

The fact that some other researchers have advocated for adding the adjective *specific* to the LD category in the SES laws (i.e., IDEA, 2004) is itself an example of how the concept of LD itself remains problematic and helps explain why this category unpredictably has become the largest among all categories (e.g., the over-identification of students with LD) (Aud et al., 2010; Cortiella & Horowitz, 2014; Zirkel, 2010). Indeed, a number of researchers have questioned whether the high percentage of students identified with LD is accurate and true (Cortiella & Horowitz, 2014; Kavale & Forness, 2000). Therefore, the failure to provide a specific/operational definition with clear components and identification criteria has led to calls for new approaches to help in identifying students with LD (Cortiella & Horowitz, 2014; Flanagan et al., 2006).

The assessment process for identifying students with LD depends primarily on operationalizing the components of the LD definition (Cortiella & Horowitz, 2014; Flanagan et al., 2006). Vaughn and Fuchs (2003) stated that throughout the history of the field of LD the most controversial issue has been the lack of acceptable identification criteria. The IQ-achievement discrepancy as a criterion for identifying LD, traditionally

the most common approach to identify students with LD, is considered at the core of the LD identification controversy (Cortiella & Horowitz, 2014; Vaughn & Fuchs, 2003). Specifically, most LD definitions, including the formal/federal definition, allude to a discrepancy between intellectual ability and academic achievement (Burns et al., 2008; Cortiella & Horowitz, 2014); indeed, the IQ-achievement discrepancy has been a major requirement of the law (Cortiella & Horowitz, 2014; Vaughn & Fuchs, 2003; Zirkel, 2011).

Despite the fact that the IQ-achievement discrepancy is often used to identify and determine eligibility of individuals with LD as a key component of the traditional identification process, many researchers over the years have criticized its use as a criterion to determine eligibility for LD (Burns et al., 2008; Cortiella & Horowitz, 2014; Flanagan et al., 2006). Although some researchers perceive the IQ-achievement discrepancy as a way to exclude low-achieving students from being identified as LD, other researchers have attributed the over-identification of students with LD to its inability to distinguish poor readers from students with LD (Kavale & Forness, 2000; McKenzie, 2009). To illustrate, several researchers have argued that the discrepancy between the achievement and IQ would not be large/severe enough to identify students as having LD until second grade or maybe later (i.e., wait to fail; Cortiella & Horowitz, 2014; Kerins et al., 2010). In this case, it would be more difficult for a child identified at such a late date of birth to catch up with his/her peers, especially since the academic failure may impede acquisition of grade-level skills (Cortiella & Horowitz, 2014; Kerins et al., 2010).

Criticisms aside, discrepancy formulas have remained the primary identification process referred to in courts' decisions (i.e., eligibility-determination as having LD) (Cortiella & Horowitz, 2014; Zirkel, 2011). In a review of published court cases, Zirkel (2010) found that none of the decisions in cases about identifying students with LD relied on RTI as described in IDEA (2004). The lack of the use of RTI to identify students with LD is not surprising given that it was introduced as an alternative/optional academic strategy, not as a substitute for the IQ-achievement discrepancy model (Cortiella & Horowitz, 2014). Thus, RTI programs are oftentimes used by schools primarily to prevent reading difficulties as early as possible, rather than an identification means for LD (Balu et al., 2015; Cortiella & Horowitz, 2014; Printy & Williams, 2015).

Response to Intervention

RTI is considered a systematic prevention-based intervention to identify and respond to students' needs, especially those who are struggling academically as early as kindergarten (Balu et al., 2015; Bryant & Barrera, 2009; Cortiella & Horowitz, 2014). Based on the IDEA (2004), the two main goals of RTI are: (1) an alternative means of identifying students with LD instead of using the historical IQ-achievement discrepancy, and (2) a prevention-based multi-tiered approach to reduce the percentage of students who experience serious reading problems (Balu et al., 2015; Cortiella & Horowitz, 2014; Johnston, 2010; Vaughn & Fuchs, 2006; Yell, 2012; Zirkel, 2010; see Figure 2). The goals of RTI support the expected outcomes of the Elementary and Secondary Education Act (ESEA, 2002; Murdick, Gartin, & Fowler, 2014) that, reauthorized as the No Child Left Behind Act (NCLB) required schools to teach all students, including those with LD,

to read at grade level, pass state standardized tests, and, in the case of students with LD, perform as well as their peers without LD (Cortiella & Horowitz, 2014; Gersten et al., 2009; Seifert & Espin, 2012; Zascavage, McKenzie, Buot, Woods, & Orton-Gillingham, 2012). These goals are to be accomplished in RTI through the use of six key components: (a) multi-tiered instruction using Evidence-based Practices (EBPs); (b) universal screening and progress-monitoring; (c) data-based decision-making; (d) criteria to determine unresponsive students; (e) multidisciplinary evaluations; and (f) special education (Fuchs & Fuchs, 2007; see Figure 1).

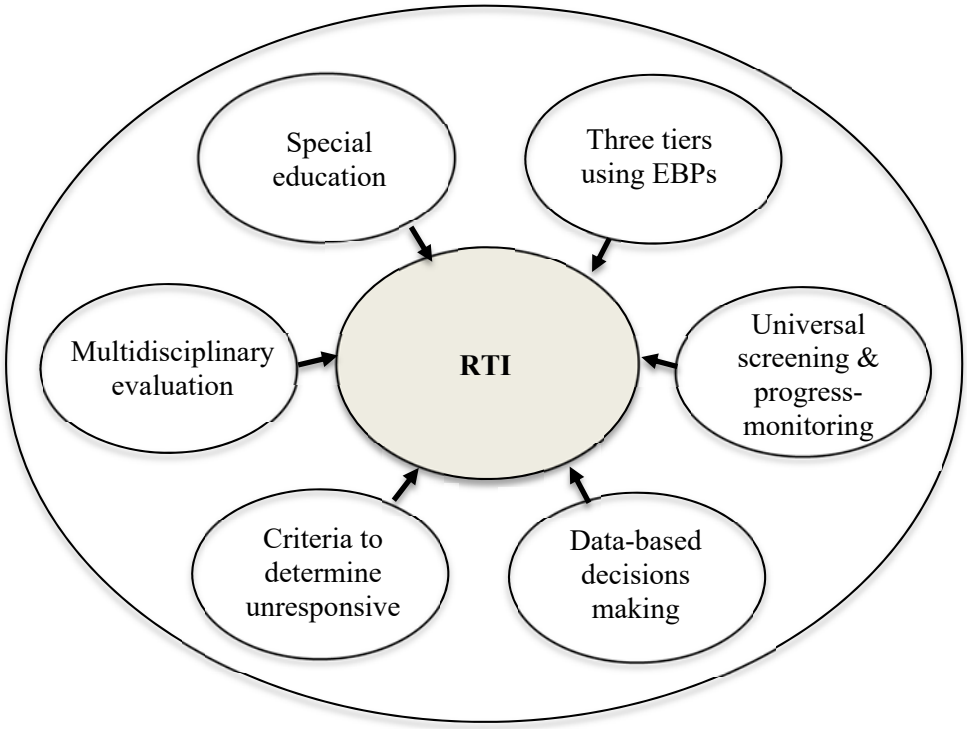

Figure 1. Critical Components of RTI. Adapted from Fuchs and Fuchs (2007).

Multi-tiered Instruction

RTI requires schools' staff to provide students with a range of tiered interventions based on their needs in the general education classroom while periodically monitoring their progress (Balu et al., 2015; Printy & Williams, 2015; Yell, 2012). Most RTI systems are comprised of three increasingly intensive tiers, as shown in Figure 1. Tier 1 is high quality instruction for all students in the general education classroom, which also includes periodic monitoring of student progress. Tier 2 consists of small group interventions for about 15% of students, and Tier 3 includes more intensive, individually-based intervention for 5% or fewer students.

As an outcome-driven approach, students who, after 6-8 weeks of Tier 1 interventions, fail to make adequate progress according to universal screening assessments, are moved to more intensive instruction in Tier 2 (Bursuck & Damer, 2015; Kamps & Greenwood, 2005). Some students may still respond inadequately, even after 6-8 weeks of Tier 2; they are moved to the most intensive instruction in Tier 3. Students who do not make adequate progress after participating in Tiers 1 and 2 can be referred to SES for possible identification as having LD (Balu et al., 2015; Brown-Chidsey & Steege, 2005; Bursuck & Damer, 2015; Duren Green, McIntosh, Cook-Morales, & Robinson-Zaartu, 2005; Flanagan et al., 2006; see Figure 2).

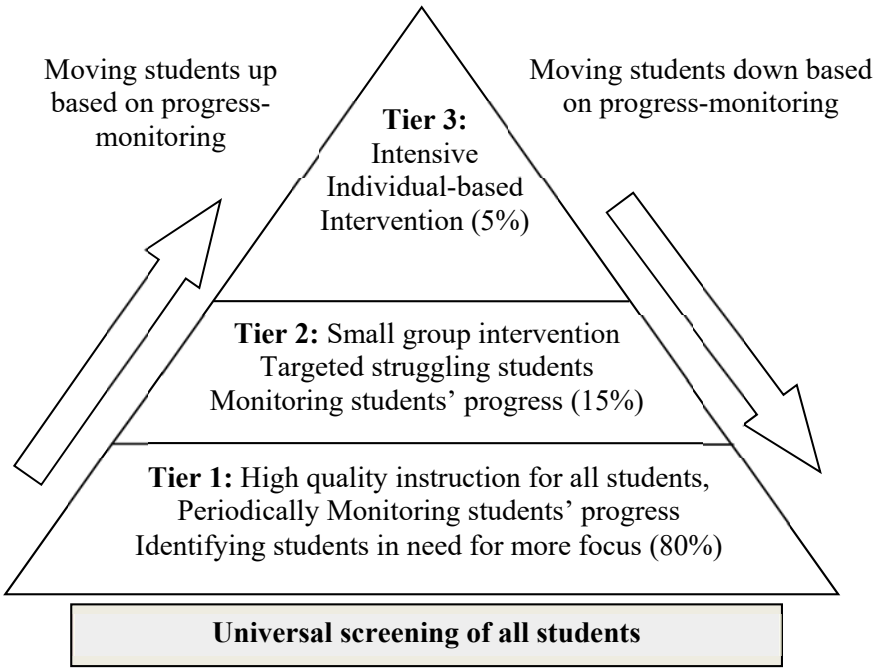

Figure 2. Three Tier Model. Adapted from Bursuck and Damer (2015).

Before pulling students suspected of having disability from general education classrooms, school staff are required to take several systematic steps, which, may ultimately lead to a decrease in the overall percentage of students referred to SES, and eventually identified as having LD (Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Yell, 2012). In fact, as stated earlier, the use of RTI has moved to be not only a method of identification, but also a strategy that can be used to decrease the number of students at-risk who can successfully learn in general education classrooms (Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Yell, 2012). IDEA allows school systems that use RTI to allocate 15% of special education funds per year for use in general education classrooms to help establish such early intervention services (Burns et al., 2008; Cortiella & Horowitz, 2014; Fuchs & Deshler, 2007; Printy & Williams, 2015).

Evidence-based Practices

Many practitioners do not use evidence-based pre-referral interventions (Flanagan et al., 2006). Schools that have implemented pre-referral interventions do not base their programs on empirical evidence, thus the type of norm-referenced tests used to measure intelligence and cognitive processes results in the overrepresentation of minority students (e.g., English language learners [ELLs]) in special education. This consequently increases the number of students referred for SES who end up as having disabilities (e.g., LD) (Hughes & Dexter 2011). However, applying RTI may resolve this issue since one of the most critical components of RTI is using EBPs, whether in the materials used (e.g., curriculum) or in the teaching strategies employed (Bursuck & Damer, 2015; Printy & Williams, 2015; Yell, 2012). In fact, using EBPs can be a meaningful strategy not only to address the issue of lack of EBPs in the pre-referral intervention, but also to bridge the historical gap between research and practice in the field of special education (Cook & Odom, 2013; Fixsen et al., 2013; Musti-Rao & Cartledge, 2007).

Historically, EBPs emerged in the field of medicine in the beginning of the 1990s and have become part of educational laws since ESEA that was reauthorized as NCLB in 2002, clearly requiring schools to use scientific-based research (Cook & Odom, 2013; Hughes & Dexter 2011). To illustrate, EBPs refer to practices/programs that are shown to have a meaningful impact on students' performance, based on high-quality research that has met specific standards and guidelines (e.g., research design, quantity, and quality) (Cook & Odom, 2013; Fixsen et al., 2013).

Two main research designs have been employed to identify EBPs in the field of special education: group experimental and single-subject research designs. For instance, Horner et al. (2005) generated specific standards that must be considered when identifying EBPs in the field of SES using single-subject research design, such as replicating the same intervention with similar participants (i.e., the total number of participants must be 20 or more) five times in five different regions by at least three different researchers. Then, when the intervention is shown to be effective and produces similar student outcomes, that specific intervention can be identified as EBPs for the students who have the same characteristics/needs.

Additionally, Gersten et al. (2005) generated specific criteria to identify EBPs in SES using experimental or quasi-experimental research designs, such as clearly describing and specifying the participants, intervention, instructional procedures, educators' roles, and student behaviors. Also, the student outcomes must be measured using multiple valid/reliable measurement tools, replicated across studies to ensure consistency, while clearly specifying how treatment integrity (i.e., fidelity of implementation) was measured. Researchers must also clearly specify, evaluate, and document what happened in the comparison and control groups, as well as describing the professional development (PD) and any support provided for educators in order to control possible variables that might affect the overall results of the studies (Gersten et al., 2005).

EBPs as part of RTI would be introduced to all students as early as grade K in the general education setting (i.e., Tier 1; Bryant & Barrera, 2009; Cortiella & Horowitz, 2014; Yell, 2012). The aid the early identification of students who are not adequately

responding to instruction within Tier 1 (Bryant & Barrera, 2009; Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Vaughn & Fuchs, 2003; Yell, 2012), and, by so doing, avoid waiting until the academic failure gap becomes larger, as required in the traditional identification process (Cortiella & Horowitz, 2014; Kerins et al., 2010). In this way, using RTI may help in resolving historical issues in the field of LD, such as the lack of effective pre-referral intervention and the adoption of EBPs in the general education settings (Cortiella & Horowitz, 2014; Flanagan et al., 2006; Printy & Williams, 2015; Yell, 2012).

Data-based Decision Making

Yell (2012) has written that RTI is considered as data-driven decision making, since the performances of all students are dynamically evaluated, documented, and analyzed (e.g., via universal screening and progress-monitoring). Also, based on these data, more intensive interventions (i.e., Tier 2 and 3) with more frequent evaluations (i.e., progress-monitoring) are provided for students who may not adequately respond to the interventions presented (Bursuck & Damer, 2015). In fact, including data-based decision making in the implementation of RTI not only has the potential to meet the SES law's demands (i.e., IDEA, 2004) of guaranteeing a Free Appropriate Public Education (FAPE) in the Least Restrictive Environment (LRE) for all students (Cortiella & Horowitz, 2014; McLaughlin & Ruedel, 2012; Murdick et al., 2014), but also may provide schools with a system of assessment for students who are at-risk as early as grade K (Bryant & Barrera, 2009; Cortiella & Horowitz, 2014; Vaughn & Fuchs, 2003; Yell, 2012). Indeed, RTI's data includes a variety of evaluation tools whether summative (i.e., standardized test),

formative (i.e., universal screening/benchmarks), or curriculum-based (i.e., progress-monitoring; Bursuck & Damer, 2015; Cortiella & Horowitz, 2014).

Universal screening. In RTI, universal screening helps educators to accurately identify students who are truly in need for intensive tiered support; progress-monitoring enables educators to make critical decisions involved in moving students between tiers (Bursuck & Damer, 2015; Yell, 2012). Students can be referred to SES for possible identification as students with disabilities, but only if they are not making adequate progress after receiving increasingly intensive tiered instruction (Bursuck & Damer, 2015; Flanagan et al., 2006; Brown-Chidsey & Steege, 2005; Duren Green et al., 2005). Therefore, the data collected through an RTI model (e.g., universal screening and progress-monitoring) could potentially help educators measure students' growth in key academic areas before making any important academic decisions (Printy & Williams, 2015; Shapiro et al., 2012).

Identifying students who have learning problems does not usually occur until they fail to perform at their grade level. Thus, it is difficult for those students to catch-up with their peers, especially since identifying such students mostly occurs too late (i.e., the end of second grade or later; Friend & Bursuck, 2015; Kerins et al., 2010). Universal screening assessment tools enable teachers to identify students who have learning problems as early as grade K, and then, help place each student in the most appropriate Tier (Friend & Bursuck, 2015). Ideally, universal screening should be conducted three times per year (i.e., beginning, middle, and end of year; Balu et al., 2015; Jenkins, 2009); thus, its data can also be used to move students between tiers (Bursuck & Damer, 2015).

A number of universal screening batteries have recently been validated/used by both researchers and practitioners (Bursuck & Damer, 2015). A screening battery for reading needs to contain subtests that accurately evaluate each of the critical reading skills (i.e., phonemic awareness, phonics, fluency, vocabulary, and comprehension). Universal screening measures must be short and easy for educators to conduct (Friend & Bursuck, 2015). Screening decisions are usually made based on at least one test score plus data from an additional/validated instructional measure. However, Fuchs, Compton, et al. (2012) recommend using two stages of universal screening in order to identify and support students who are truly in need.

Progress-monitoring. While universal screening needs to be conducted three times per year, progress-monitoring tests are conducted more frequently, depending on factors such as student Tier placement. To illustrate, some Tier 2 students may require that their progress be monitored every week (Bursuck & Damer, 2015), whereas additional tests might be used to monitor the progress of students who continue inadequately responding to Tier 3 interventions (Friend & Bursuck, 2015; O'Meara, 2011). Progress-monitoring also needs to be brief and able to be given frequently during the school year in order to check whether or not each student is making adequate progress. In this way, progress-monitoring assessments can inform educators as to whether any additional support should be provided (Bursuck & Damer, 2015; O'Meara, 2011). Progress-monitoring is used not only to make instructional Tier placement decisions, but also as valuable data to be considered when evaluating some students for having disabilities (Friend & Bursuck, 2015). In terms of the appropriate use of progress-

monitoring measures, there are several criteria that need to be considered. Progress-monitoring tests should be conducted periodically depending on the performance of each student; progress-monitoring tests should also reflect the content and difficulty of the curriculum in order to provide educators with validated data to determine the rate of growth of each student (Bursuck & Damer, 2015; Jenkins, 2009).

Overall, a number of researchers suggested that in order to accurately and sufficiently evaluate the performance of students who are ELLs, educators should use the students' native language to evaluate their reading skills, specifically reading comprehension (Escamilla, 2007; Getting Smart et al., 2016; Haager et al., 2010; Hardin, Mereoiu, Hung, & Roach-Scott, 2009; Vaughn & Briggs, 2003). This is particularly important since 10% of the overall student population in U.S. K-12 public schools are ELLs (i.e., five million students; Getting Smart et al., 2016). Nevertheless, the percentage of ELLs noticeably increased over the past few years, and by the year of 2030, ELLs are projected to represent 40% of K-12 students in the U.S. public schools (Getting Smart et al., 2016).

Impact of RTI on Student Outcomes

As previously stated, preventing reading problems with the eventual goal of decreasing LD referrals is considered one of the main goals of RTI (Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Fuchs & Deshler, 2007; Vaughn & Fuchs, 2003). The central idea of RTI is to provide such students with sufficient educational services using multi-tiered intervention that adequately meet their specific needs (Johnston, 2010; Vaughn & Fuchs, 2006; Printy & Williams, 2015). In the following chapter's section,

studies that examined effective tier practices in terms of students' achievement outcomes are summarized. The studies are reviewed/organized according to two dimensions: (1) studies that examined the impact of Tiers 1 and 2 together, or only Tier 2; (2) studies that implemented all 3 Tiers. Studies that examined the impact of RTI on the percentage of students identified with LD are also reviewed.

Tier 1 and 2 studies. Numerous researchers have examined the effectiveness of both Tiers 1 and 2 together. Scanlon, Gelzheiser, Vellutino, Schatschneider, and Sweeney (2008) investigated the effectiveness of Tiers 1 and 2 in preventing among kindergarten students identified as AR. In this study, Tier 1 and 2 interventions were significantly effective in preventing/reducing the incidence of reading problems among targeted students. Three cohorts of students in K-1 from 12 schools were followed for three consecutive years. Three treatment conditions were used: (a) PD only, i.e., Tier 1; (b) implementation intervention only (IO), i.e., Tier 2; and (c) both PD and IO. The study had several limitations. First, due to the study design, it was not possible to provide students with different tiers based on their performance on progress-monitoring assessments. Many students in the IO condition in the study did not receive Tier 1 first. Also the results of Tier 2's effectiveness could have been affected by the fact that the educators did not receive PD.

Vaughn et al. (2010) examined the effectiveness of a comprehensive researcher-provided reading intervention with sixth grade students identified as struggling readers. The focus of the intervention was on four reading skills (i.e., word recognition, vocabulary, fluency, and comprehension). After receiving one year of Tier 1 and 2

interventions, the reading achievement scores of struggling sixth grade students were significantly higher than students who only received Tier 1. However, the results of the study could have been affected by the fact that students in Tier 1and 2 also received varying supplemental intervention provided by schools, including individual tutoring. Kerins et al. (2010) investigated the effectiveness of supplementary reading instruction in Tier 2 for first grade students identified as at-risk as compared to at-risk students who received only Tier 1. The focus of the Tier 2 intervention was on three reading skills: phonemic segmentation, phonemic blending, and phonics. No statistically significant differences were found between first grade students (*n*=11) who received the Tier 1 intervention (i.e., daily classroom reading instruction provided by a classroom teacher using research-based reading curriculum), and students who received Tier 2 (*n*=12) (i.e., Tier 1 plus 15-30 minute sessions provided by speech-language pathologists, and 18- to 30-minute intervention sessions of multi-sensory phonics instruction provided by special educators). The results of the study showed that the performance of students in each group significantly improved. Unfortunately, the study did not provide detailed data about the procedures used for periodic progress-monitoring as well as of fidelity of implementation data.

The following studies examined the effectiveness of receiving Tier 2 interventions alone. Koutsoftas, Harmon, and Gray (2009) studied the effectiveness of a Tier 2 reading intervention designed to improve the phonemic awareness skills of preschool students who came from low-income families. After six weeks of Tier 2 intervention, the phonemic awareness skills of students (*n*=34) in five classrooms significantly improved.

The Tier 2 intervention was provided in a small group (i.e., 3-4 students), 2 days per week for 20-25 minutes per day by classroom teachers who received PD focusing on early literacy skills. However, the fact that the use of pretesting was 5 months prior to the implementation of Tier 2 calls into question whether or not Tier 2 was responsible for the gains, especially since the Tier 2 intervention was implemented for a relatively short period of time (i.e., 6-8 weeks). The authors stated that six students from the sample received SES, without providing any additional clarifying information. This finding is interesting in view of the fact that only three of these identified students were eligible to receive Tier 2, and raises questions regarding the criteria used to determine the eligibility of all students in each group. Although the study provides detailed fidelity of implementation data, there was a lack of data provided about the qualifications of the teachers and teacher assistants as well as the PD program that prepared them.

Vernon-Feagans et al. (2010) investigated the effectiveness of a Tier 2 intervention provided by classroom teachers for struggling K-1 students in three rural, low-socioeconomic schools. The goal of the intervention was to equip teachers with knowledge about early reading instruction for, struggling students, and help them provide more intensive instruction using both one-on-one and small groups in 15-minute daily sessions. The researcher examined whether or not PD would increase both the cost of the intervention delivered by classroom teachers as well as the efficiency of the reading intervention as implemented in the targeted schools. Twenty classrooms were recruited with 12 experimental and eight control groups, and within each class five struggling and five non-struggling students were randomly selected. Struggling students in the

experimental group received a Tier 2 intervention with varying one-on-one sessions for each student (e.g., duration of the sessions depended on each student's needs). Non-struggling students and all students in the control group received the general education classroom reading instruction. Although the results of the study showed that Tier 2 benefited the struggling readers in kindergarten, improving word reading skills and helping them to catch-up with their non-struggling peers, the struggling students in first grade did not benefit from the Tier 2 intervention. There was also evidence for the cost effectiveness of the PD; the practices of classroom teachers in reading were enhanced, and specialists were not needed to deliver reading intervention. However, the length of study was relatively brief (i.e., 9 weeks). Moreover, the small number of schools included could limit the generalization of the results. In addition, excluding students who were ELLs from the sample limited the generalization of the results. Finally, providing struggling students with a Tier 2 intervention without Tier 1 calls into question whether or not providing them with Tier 1 first could have made the use of Tier 1 unnecessary.

Kamps and Greenwood (2005) examined the effectiveness of a Tier 2 reading intervention to improve the reading skills of first grade students identified as AR. The intervention was significantly effective in improving the reading skills of targeted students (n=176) compared to students who were also at-risk (n=164) but did not receive the Tier 2 intervention over 3-5 months. However, the study did not provide additional data about reading instruction in the comparison groups. Although dividing the eight schools into four experimental and four comparison groups was done at random, there was no information about the criteria used to select these schools in the first place. The

unequal number of at-risk students also could have increased the overall outcomes of students' performance in the comparison group. Further, there were no data provided about the teachers' qualifications. While the focus of this study was on the effectiveness of Tier 2 as part of a three-tier intervention program, no data were supplied about Tiers 1 and 3. Also, the short time for PD (i.e., 5-days), calls into question whether or not the school staff could adequately implement the three-tier intervention in their schools. This is particularly likely, since comparing the observation data collected showed that the time devoted for the Tier 2 intervention and the total time devoted for reading instruction across all tiers was greater in experimental schools than comparison schools. Moreover, the study mentioned that while some students did not adequately respond to the intervention, no data were provided about the percentage of those students.

A case study by Harlacher, Walker, and Sanford (2010) investigated the effectiveness of a Tier 2 reading intervention designed to improve the reading skills of a single student in grade 2 identified as AR. Receiving a small-group Tier 2 intervention for 6-weeks with students in second grade who performed below average as compared to their peers in literacy was effective in helping him meet the end-of-grade benchmark. The student was provided with an intervention in a small group (i.e., 8 students) by the RTI team; however, the rate of growth was still inadequate until they reduced the group size from eight to six and used error-corrections. Although the study provided descriptive information about the content of the Tier 2 intervention, there was little information provided about the materials used in the Tier 1 and 2 interventions and the qualification of the classroom teacher, including whether or not he received PD before or during the

implementation of Tier 2. Also, there was a lack of information about the qualifications and roles of each of the RTI team members.

Denton et al. (2010) examined the effectiveness of a small group Tier 2 intervention on the reading skills of two cohorts of at-risk first-grade students (*n*=182) from 31 schools. The experimental groups of at-risk students received Tier 2 instruction over 25 to 35 weeks per year and were compared to a group of 240 students who did not receive Tier 2. The results of the study showed that the Tier 2 intervention significantly improved the reading skills of targeted students. However, the post-test results showed that both groups improved; 91% of the students in the experimental groups and 79% in the comparison groups met the basic RTI benchmark. The increase in performance of the comparison groups might be attributed to both the varying types of interventions used by classroom teachers as well as the fact that using the same screening measures with all groups led classroom teachers of the comparison groups to spend instructional time teaching the targeted skills. Interestingly, while students in Tier 2 outperformed students in the comparison groups, the materials used with them were not evidence-based. Also, instead of providing teachers of Tier 2 students with PD, the research team provided them with the guidelines for their daily instruction, which might have negatively affected the fidelity of implementation. Fidelity may also have been affected by the fact that it was conducted only once every nine weeks and did not include providing teachers with feedback.

Wanzek and Vaughn (2008) investigated the impact of increasing the intensity of a Tier 2 reading intervention on the performances of two cohorts of first grade students

identified as AR. Two cohorts of at-risk first-grade students in two consecutive academic years from six elementary schools (i.e., 25 classrooms) were involved. In the first year, all at-risk students were randomly assigned to experimental (*n*=23) or comparison groups (*n*=34). In the second year, two groups of at-risk students were identified and assigned to experimental (*n*=16) and comparison (*n*=24) groups. The first cohort of students in the experimental group received small-group Tier 2 intervention in a separate setting for 30 minutes daily. The second cohort was provided with the same content of Tier 2 intervention with twice-daily sessions for a total of 60 minutes. After implementing the intervention for 13 weeks, the results showed that there were few differences between students' responses in both experimental groups. Also, the differences between the experimental and comparison groups in the second cohort were not statistically significant, and none of the students in either group achieved the end-of-first-grade benchmark. The authors stated that providing all first-grade teachers in these schools with PD to improve their practices in core reading instruction, especially for struggling students, might have increased the performances of students in both comparison groups. The fact that the sample size was reduced to only 11 after attrition (i.e., students from both cohorts moving out of the school district during the implementation of the intervention) could have also affected the results of the study.

Musti-Rao and Cartledge (2007) examined the effects of a supplemental small-group (i.e., 2-3 students) Tier 2 early reading intervention to improve the reading skills of students identified as AR. Based on both universal screening and teachers' nominations, seven kindergarten students from two classrooms in a large urban school were assigned

to three separate groups. The focus of the intervention was on phonemic awareness and phonics and was provided for 20 minutes a day three days per week over 16, 12, and 8 weeks for each group respectively. By using a multiple-baseline design across students and comparing the pre and post-tests, the study demonstrated strong effects for Tier 2 for all participants. Five of the seven students also met the end-of-year benchmark for targeted skills, and the performance of other students who did not meet the end-of-year benchmark did improve enough to convince their school to promote them to first grade. Unfortunately, there were no detailed data provided about the qualifications of classroom teachers or the reading curriculum. Also, although the study provided data about fidelity of implementation, no information was provided regarding how often the teachers were observed. Further, the focus of the intervention was only on phonemic awareness and phonics skills; thus it is unknown whether similar effects could have been obtained for other critical reading skills such as fluency, vocabulary, and comprehension.

Although it was difficult to conclusively determine what interventions were truly effective in Tier 1 and 2 in the studies just reviewed, several elements within each Tier seemed to work. Researchers found that, generally speaking, when EBPs were used appropriately in Tier 1, fewer students needed to be moved to more intensive tiers, thus reinforcing the importance of implementing Tier 1 effectively since that would allow the majority of students to receive their initial instruction within Tier 1, the LRE for most students (Cortiella & Horowitz, 2014; Friend & Bursuck, 2015; Yell, 2012).

To illustrate, for students who are at-risk or have disabilities, researchers have validated some important teaching techniques (i.e., EBPs), that effective in all tiers and

should be a part of Tier 1. For instance, at the beginning of the lesson, the teacher should establish a comfortable level of expectations by explaining to the students what they are going to learn and why, and what the expected behaviors are during the lesson (Bursuck & Damer, 2015; Ornstein & Lasley, 2004). Also, teachers in Tier 1 should ensure that all students are actively engaged, have multiple opportunities to respond, present materials using language that students can understand, and, by so doing, maximize the rate of attention of all students including those who are ELLs (Bursuck & Damer, 2015; O'Meara, 2011).

Teachers also need to model any new skills and provide students with additional support in the form of making explicit corrections when errors are made. Teachers should also display a mastery orientation, continuing instruction until students learn the skill presented. Finally, teachers need to use universal screening and progress-monitoring to periodically assess students' performance, and then differentiate instruction based upon their students' needs (Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Friend & Bursuck, 2015; O'Meara, 2011; Ornstein & Lasley, 2004). Researchers have also determined that instructional content may vary, depending on student grade (e.g., K-2) (Bursuck & Damer, 2015; Gersten et al., 2009). For instance, Tier 1 for grade K needs to include skills such as phonemic awareness and listening comprehension, whereas Tier 1 for first grade should include phonemic awareness, phonics, fluency, vocabulary, and comprehension. Also, Tier 1 for second graders needs to focus on phonics, fluency, vocabulary, and comprehension, whereas, Tier 1 for grades 3-12 needs to be focused on fluency, and reading comprehension (Bursuck & Damer, 2015).

Evidence-based reading interventions for Tier 2 need to be focused strategically on key foundational skills. To illustrate, Tier 2 should be conducted in small groups of three to four students (Friend & Bursuck, 2015; O'Meara, 2011). For students in elementary school, Tier 2 needs to meet three to five times weekly for at least 20 to 40 minutes per meeting, whether inside or outside classrooms (Bursuck & Damer, 2015; O'Meara, 2011). General education teachers (GETs) and/or special education teachers (SETs) can carry out Tier 2 interventions. Even if the SETs implement Tier 2, GETs can help in administering and analyzing progress-monitoring tests, and then helping the RTI team make educational decisions regarding moving students between tiers. Also, progress-monitoring data in Tier 2 need to be collected more frequently than for Tier 1 (i.e., every 2 weeks) to ensure that each student continues is make adequate progress and does not fall further behind his/her peers (Bursuck & Damer, 2015; O'Meara, 2011).

Studies including all 3 Tiers. Legere and Conca (2010) employed a case study design to investigate the effectiveness of a three-tier RTI process to improve the literacy skills of a student with severe LD. The student was 10 years old and in the fourth grade; he was performing at a first grade level and had been receiving formal SES in his previous school since first grade. Although a formal test of intellectual ability showed that his IQ was average to low average, the gap between his abilities and performance in reading and writing was considerable. Evaluating his performance after he received the multi-tiered intervention for one year showed that his performance had improved to late second grade. Still, the gap between him and his peers remained wide, and he had difficulty accessing the mainstream curriculum in reading and writing without significant

adaptations of tasks and peer support via partner reading. Although the study provided detailed data about the contents of the intervention in each tier, there was a lack of detailed data about the criteria used to move him between tiers. Further, the effectiveness of the three-tier intervention could have been affected by the qualifications of the personnel who worked with him in each tier, but unfortunately these qualifications were not provided. The study also mentioned that according to the student's individualized education program (IEP), he had an attention deficit disorder. Therefore, the growth in his performance could be attributed not only to the intervention but also to the fact that he was free from classroom distractions (e.g., working one-on-one in Tier 3, or in a small group in Tier 2). Consequently, the growth in his performance might be attributed to factors other than reading intervention alone.

Marr, Algozzine, Kavel, and Dugan (2010) examined the effectiveness of a one-year multi-tier reading fluency intervention (i.e., Tiers 1, 2, 3) to improve the reading skills of second grade students identified as at-risk (n=219) from 14 elementary schools as compared to students who received general classroom reading instruction (n=322). The treatment cohort was assigned to one of three groups. The first group received peer coaching for fluency building alone (PCFB-I) (i.e., Tier 1) (n=91); the second group called PCFB-II (i.e., Tier 2) (n=83) received PCFB plus the Reading Mastery program addressing basic reading skills. The third group called PCFB-III (i.e., Tier 3) (n=45) received PCFB plus a different supplemental intervention developed by researchers addressing beginning reading skills. Classroom teachers provided interventions for all treatment groups three times per week for 15-30 minutes per meeting. The end-of-year

assessment showed that the reading fluency growth of students in all treatment groups was significantly greater compared to those in the control group. Also, the reading fluency growth of students in Tiers 1 and 2 was significantly greater than students in Tier 3. However, due to the fact that all students in all groups received additional supplemental reading support including one-on-one instruction, the increase in student outcomes could be attributed to factors other than the intervention (i.e., additional supplemental intervention provided by schools). Although the study provided detailed data about the fidelity of implementation, the assignment of students to treatment groups was not random, and because of the study design, there was no chance to move students between tiers based on progress-monitoring data

Gettinger and Stoiber (2008) investigated the effectiveness of implementing the Exemplary Model of Early Reading Growth and Excellence (EMERGE) program using a multi-tier intervention (i.e., Tier 1, 2, and 3) designed to promote early literacy and language skills development in low-income and at-risk minority students in 25 pre-kindergarten classrooms. The focus of the program was on sound awareness, oral language, and print awareness with the purpose of preventing 15 at-risk students from failure in reading and referral to SES. A comparison of the beginning-of-year and end-of-year performance of students who received the program showed that the students who received EMERGE performed significantly higher on all of the reading measures. Unfortunately, the study did not provide data about the materials used and the amount of time reading instruction was provided to the control group. Also, the increase in the performance of students who received EMERGE could be attributed to the experimental

group having a greater overall percentage of teachers who were both more experienced and had worked at the same school for a long time. Additionally, the lack of data about the ages of students in each group calls into question whether or not the students in the treatment group were older than the control group, a factor that might explain the difference in performance.

Kamps et al. (2008) examined the effectiveness of various types of early literacy interventions (e.g., curricula) within a three-tier model in grades K-2, rather than examining the multi-tiered approach itself. Based on the results of a universal screening measure, a total of 106 students from eight urban elementary schools were identified as AR. Schools were randomly assigned to experimental or control conditions (i.e., four experimental and four control schools). At-risk students in the experimental schools were assigned to small intensive instructional groups (i.e., 3-6 students) receiving three types of controlled curricula that used generic direct instruction. In the comparison schools, participants were assigned to small, intensive instructional groups of 3-12 students, but the lessons were less structured lessons, and the curricula less controlled. The control group also had no access to a three-tiered intervention option. Results revealed a tendency towards greater gains for the more structured curriculum. In addition to the intervention, the increase in the performance of students in the experimental group could be attributed to other factors such as group size, the various components of the intervention, and the qualifications of the teachers.

Overall, the nature of Tier 3 by itself can vary. In some cases, Tier 3 is considered as SES, whereby students typically receive one-on-one intensive intervention, mostly

from SETs, for about 45 to 120 minutes daily (Gersten et al., 2009; Friend & Bursuck, 2015). However, in other cases, a school might use Tier 3 as a last intervention step before referring students to special education (e.g., LD; Friend & Bursuck, 2015). The most effective grouping strategy found with students in Tier 3 is one-on-one, as each student might need as many as 10 to 30 practice opportunities compared to their peers to acquire a targeted skill (Fuchs, Fuchs, et al., 2012; Gersten et al., 2009). Some students in Tier 3 might need to receive intensive explicit/systematic instruction for one or two years using a separate, intensive, commercially developed reading program in addition to the daily reading instruction in the general education classrooms (Friend & Bursuck, 2015). Further, for students who fail to acquire specific skills in a previous grade, teachers may need to use out-of-level instruction to build the fundamental skills required to acquire grade-level skills (Fuchs, Fuchs, et al., 2012; Friend & Bursuck, 2015).

Impact of RTI on LD Identification

All studies that have examined the impact of RTI on the percentage of students identified as LD have implemented all three Tiers. R. E. O'Connor, Harty, and Fulmer (2005) investigated the effectiveness of increasing levels of reading intervention (i.e., Tier 1, 2, and 3) to reduce the reading disabilities among a cohort of kindergarten students through third grade. The result of the study, based on the historical percentage of students in SES before and after the implementation of the intervention, showed that the four-year intervention reduced the percentage of students in SES in K-3 grades from two schools. The intervention was provided by GETs, SETs, and remedial education teachers. The PD (i.e., for Tier 1) started with teachers of grades K-1 for the first year and an

additional grade was added each successive year. Tier 2 instruction targeted students who were behind their peers on both phonemic awareness and letter knowledge in small groups (i.e., 2-3 students) for 10-15 minutes three times a week. Tier 3 targeted students who were eligible for SES as LD for 30 minutes five days per week. The historical percentage of students in SES was 15% (i.e., most of them with LD), and after implementing the study, only 6% of students were identified with LD. Unfortunately, it was unclear how researchers measured the teachers' fidelity of implementation across classroom instruction in Tier 1, which calls into question the exact nature of instruction in this tier.

A study by Wanzek and Vaughn (2011) examined the effects of a multi-tiered reading intervention (i.e., Tiers 1, 2, and 3) on the percentage of students identified as having disabilities (e.g., LD). Their five-year study conducted in seven elementary schools involving three successive cohorts of students starting from kindergarten through third grade found that the differences in the overall percentage of students who were identified with special needs was not statistically significant after implementing the three-tier intervention. However, the fact that students in the small-group Tier 2 and 3 instructions received the intervention outside their classrooms during reading time may have prevented them from benefitting more fully from general education instruction. Additionally, the primary goal of the study was not to investigate the LD identification procedure using RTI as a means of identification. Instead, the student identification procedure relied on a traditional IQ-discrepancy model regardless of students' progress-monitoring data collected through the three-tiered model. Last, there was lack of detailed

data about the instructional practices provided to the historical control group (i.e., the first cohort).

VanDerHeyden et al. (2007) investigated the effectiveness of RTI in reducing the number of students identified with LD and placed in SES by comparing the historical percentage with percentages obtained after implementing RTI. Initiated in 2002-2003, the study involved two elementary schools using a multiple baseline across schools design. One more school was added to the study in 2003-2004 and two more schools were added in 2004-2005. The students included in the study ranged from grades one to five. The RTI approach employed in the participating schools was the System To Enhance Educational Performance (STEEP), which was being used as a pre-referral intervention process and a source of data upon which considerations were being made by the school's decision-making team. STEEP provided training to the teachers and materials needed to teach students reading, writing, and math. The implementation of STEEP decreased the number of students placed in SES from 29 in 2002-2003 to 14 in 2003-2004 in the first two schools. Also, one year after the implementation of STEEP, the overall percentage of students with LD was reduced from 6% to 3.5% over all schools conducting the intervention. However, the selection of the schools was not random. Further, there were no baseline data pertaining to the third school, since the implementation of the study started concurrently with the school's first year of operation. In addition, the study was limited by the unavailability of enough baseline data points; thus, the effects could have been chance-related. The repeated use of the same assessment materials in STEEP screening and weekly progress-monitoring during intervention could have increased

student performance due to test familiarization. Unfortunately, the study did not provide any data about any changes in the percentage of students in SES in schools four and five.

While most of the studies described in this review implemented RTI as an early prevention reading intervention rather than as a means of identifying students with LD in reading, some studies have used a three-tier RTI model to identify students with LD (i.e., R. E. O'Connor et al., 2005; VanDerHeyden et al., 2007; Wanzek & Vaughn, 2011). The process of identifying students with LD in all studies (i.e., R. E. O'Connor et al., 2005; VanDerHeyden et al., 2007; Wanzek & Vaughn, 2011) relied heavily on the comparison between the historical percentage of students identified with LD before and after the implementation of RTI rather than providing detailed explanations of the other critical components of this approach, such as multidisciplinary evaluation to design SES or the role of SES itself within the RTI model (Fuchs & Fuchs, 2007; see Figure 1). Thus, the matter of how to effectively implement three tiers model of RTI using EBPs as identification means for students with LD remains ambiguous (Balu et al., 2015; Cortiella & Horowitz, 2014; Printy & Williams, 2015; Pyle et al., 2011).

Although Sparks (2015) indicated that 70% of the school districts are currently implementing RTI across the country, the only available data regarding the decrease in the students identified as LD across the nation was from the 2011 Annual Report to Congress on the Implementation of IDEA (Cortiella & Horowitz; 2014; U.S. Department of Education, Office of Special Education Programs, 2011), whereas only 56 districts were implementing RTI at that time (Prasse et al., 2012). Thus, often times, many schools used RTI as early prevention of academic failure with students struggling with reading in

early grades rather than a means of identifying those with LD (Balu et al., 2015; Cortiella & Horowitz, 2014; Printy & Williams, 2015). One thing that is clear: implementing RTI in schools can change educators' roles in the teaching process (Printy & Williams, 2015; Tilly, Harken, Robinson, & Kurns, 2008), and potentially lead to ongoing collaborative discussions about the principles of teaching and learning among teaching staff, such as GETs and SETs, as well as non-teaching staff such as curriculum coordinator/literacy coach (CC/LC), psychologists, speech language pathologist (SLP), counselor, and school principals (Fuchs, Fuchs, et al., 2012). This discussion could aid in consensus building, which might in turn lead to more effective implementation of RTI (Printy & Williams, 2015; Sansosti et al., 2011). Indeed, Implementation Science suggests that educators play a key role in the effective implementation of RTI (Cook & Odom, 2013; Fixsen et al., 2013, 2005). Thus, their opinions regarding RTI implementation are important to consider. Unfortunately, few published studies have sought to discern educators' thoughts regarding the implementation of RTI in reading. In the next sections, the potential benefits of viewing the implementation of RTI through the lens of Implementation Science in general, and educators' perceptions in particular, are discussed.

Implementation Science

Researchers have recommended applying Implementation Science as a method to narrow the divide between research and practices in the field of special education by sustaining effective implementation of EBPs (e.g., as in RTI) to improve all students' outcomes (Cook & Odom, 2013; Fixsen et al., 2013, 2005). Implementation Science

initially emerged in the field of medicine where implementation also occupies the critical nexus between research and practice (Eccles & Mittman, 2006; see Figure 3).

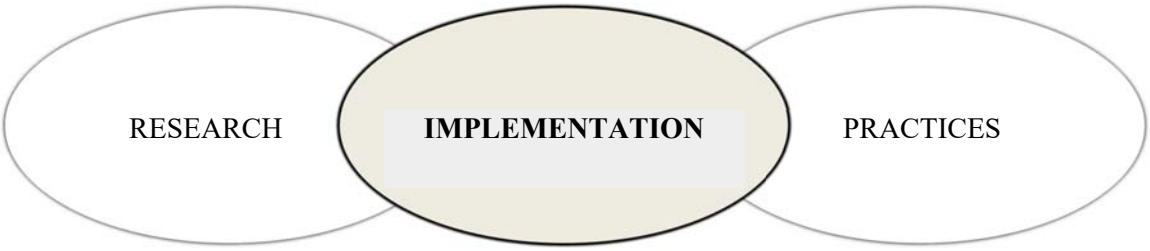

Figure 3. Implementation Intersection. From Halle (2012, p. 5).

Implementation Science is defined as science that "uses common frameworks, principles, and best practices to study and improve implementation of evidence-based or evidence-informed practices in the real world" (Halle, 2012, p. 4). Recently, researchers have advocated for applying Implementation Science to the field of SES in order to enhance and promote the integration of research-based practices into educators' routines with the ultimate goal of improving students' outcomes (Cook & Odom, 2013; Fixsen et al., 2013, 2005). Implementation Science is a potentially effective method of not only closing the gap between research and practice, but identifying gaps in the implementation process as well (Fixsen et al., 2013, 2005; Halle, 2012).

As educators play an essential role in the implementation process (see Figure 4), considering their perspectives could help in promoting the appropriate implementation of RTI, as well as provide schools' administrators, researchers, and policymakers with insights regarding the effectiveness of school reform in general (Darling-Hammond, 2009; Greenfield et al., 2010; Printy & Williams, 2015). Indeed, educators' acceptance,

feelings, and commitments toward the implementation of EBPs are key factors influencing the sustainability of appropriate implementation (Denton et al., 2003; Donnell & Gettinger, 2015; E. P. O'Connor & Freeman, 2012).

In their extensive literature review, Fixsen et al. (2005) described the Core Implementation Components for effective/successful implementation of EBPs and the dynamics involved in an effective implementation process (see Figure 4). The core components of implementation are integrated and compensatory, with the model beginning with *Staff Selection*. In this step, staff qualification, selection, and recruitment method, as well as some nonacademic factors such as ethics, willingness to learn, and willingness to intervene, are very critical in the *Staff Selection* phase. *Pre-service Training* is another critical phase to provide practitioners with the knowledge, skills, information, background, and key practices needed to implement EBPs successfully (e.g., teacher preparation programs at the university level).

The *Consultation and Coaching* phase can further provide practitioners with the knowledge, skills, and information needed to implement EBPs by applying their knowledge in the real world. *Pre-service Training* and *Consultation and Coaching* can help ensure that staff can carry out the implementation of EBPs successfully in the beginning stages of implementation. The *Staff Evaluation* phase is designed to evaluate the use of skills learned in *Pre-service Training* and reinforced in the *Consultation and Coaching* (i.e., in-service) phases. Evaluating the fidelity of implementation during *Staff Evaluation* provides valuable information that can be used to reconsider the usefulness of skills learned during *Pre-service Training* and *Consultation and Coaching*. In the

Program Evaluation phase, the overall performance of a school is evaluated to improve and sustain the implementation of EBPs with fidelity over time. The *Facilitative Administration* phase plays a key role in improving the overall performance of a school and making any needed decisions to support the processes of implementation. *System Intervention* involves the financial, organizational, or human resources external supports required to improve the overall performance of the organization/school.

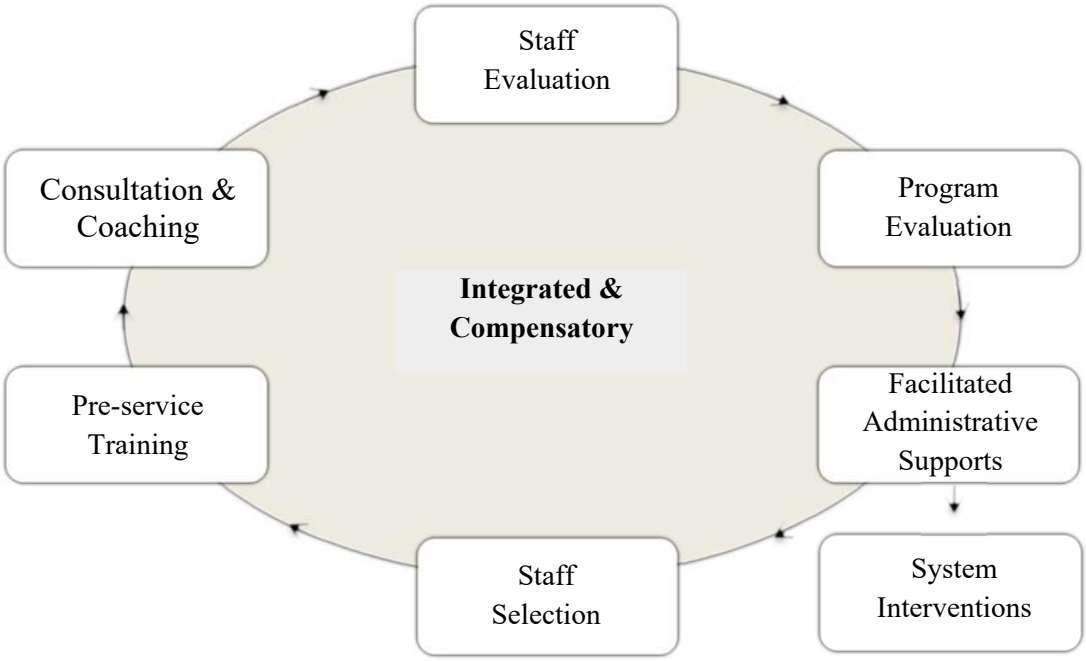

Figure 4. Core Implementation Components. From Fixsen et al. (2005, p. 34).

Fixsen et al. (2005) also indicated that educators' feedback/perspectives could help to promote all implementation components, especially *Facilitated Administrative Supports* and *System Interventions,* since they can provide school administrators, researchers, and policy makers with valuable feedback. While all *Core Implementation Components* intersect with one another in the *Integrated and Compensatory* nature of this

theoretical model, when the *Staff Evaluations* or *Program Evaluations* show that changes are needed, the *Integrated System* can and should be adjusted in order to improve and sustain the overall effectiveness of EBPs and implement it with a high level of fidelity (Cook & Odom, 2013; Fixsen et al., 2013, 2005).

The qualitative phenomenological study carried out in this dissertation is theoretically grounded in Implementation Science, since the focus of the study is to better understand the RTI approach in reading in the real world from the perspectives of educators (i.e., GETs and SET, CC/LC, psychologist, SLP, counselor, and school principal). Indeed, educators are expected to know more about the actual dynamic and the long-term impact of the implementation process (Fixsen et al., 2005), and can thus provide valuable information that can be used to improve RTI implementation.

Educators' Perceptions of RTI

The gap between research and practice in SES has been mentioned in the SES literature as one of the issues that needs to be bridged in order to produce more positive student outcomes (Cook & Odom, 2013; Printy & Williams, 2015). While researchers are still investigating/identifying the most effective EBPs that can be used in RTI (Kerins et al., 2010; Sparks, 2015), educators have yet to receive the empirical guidelines and support required to implement such practices effectively (Cook & Odom, 2013; E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). Indeed, as already stated, identifying the EBPs is only one step; the sustainable and effective implementation of such practices is another critical step needed to gain the expected student outcomes (Cook & Odom, 2013; Fixsen et al., 2013, 2005). That is why Fuchs, Fuchs, et al. (2012)

have argued that a smart RTI model should be implemented as a collaborative and comprehensive effort between educators in all levels.

Unfortunately, many educators increasingly mistrust politicians and education administrators and the various rationales they provide for any new changes (Donnell & Gettinger, 2015; Hargreaves, 2004). This mistrust is perpetuated by the fact that EBPs are oftentimes disseminated by researchers using ways that are unfamiliar to educators (i.e., journal articles). Many leaders in the field have argued for providing educators with ongoing, in-depth PD as an effective way to promote the implementation of EBPs (Fuchs & Deshler, 2007). However, using PD alone may not guarantee sustainable changes in educators' practices (Cook & Odom, 2013; Pyle et al., 2011). This is especially true in view of the fact that much information about the implementation of RTI continues to be ambiguous (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015; Pyle et al., 2011).

Educators' roles and perspectives are central in the implementation of RTI, yet educators' perspectives on EBPs implementation are rarely studied (Greenfield et al., 2010; Printy & Williams, 2015). Neither are educators' perspectives included in discussions of the effectiveness of schools' change/reform initiatives (Darling-Hammond, 2009; Donnell & Gettinger, 2015). In this section, research on educators' perspectives regarding RTI is described, followed by the rationale for the proposed research, including the research questions.

Previous Research on Educators' Perspectives of RTI

Sansosti et al. (2011) investigated the perspectives of special education directors regarding the implementation of RTI and found that most participants' concerns centered around four main themes. First, there were challenges regarding systematic structures when implementing RTI, such as the inflexibility of students' schedules to receive interventions as recommended. Second, there was concern about the roles and attitudes of SETs, parents, and community members, and the need for more effective collaboration to better implement RTI. Third, there was a critical need for EBPs and data-driven decision making to implement RTI successfully. Fourth, there were also concerns about the quality of in-service training and PD for SETs and GETs in order to implement RTI effectively. Unfortunately, the study did not include the perceptions of SETs. Additionally, all schools included in the sample were secondary schools (i.e., grade 9-12), and the schools were not racially/ethnically diverse. Finally, all emerging themes and data analysis processes were conducted by the authors without validating them using peer checking, thus calling into question the trustworthiness of the findings.

Pavri (2010) explored educators' perceptions of the capacity of schools to implement an RTI model in behavioral skills with students who were at-risk of social-emotional behavioral difficulties. Nine SETs from three large urban schools participated in two focus group sessions consisting of one hour for each session facilitated by the researcher. Many of the students at these three schools were ELLs who came from low-income families. Several teachers revealed that communicating with parents was an effective technique to implement RTI successfully; other teachers mentioned that

collecting students' data appropriately (e.g., universal screening and progress-monitoring) led to the more effective implementation of interventions. It is important to note that while the study followed the structure of RTI in terms of using a multi-tiered intervention with universal screening and progress-monitoring, the main focus was using the RTI model for behavioral problems, not reading. Additionally, five of the participants worked with students in middle school, and only one teacher worked with students in grades K-5. Thus, the study's application to elementary and high school RTI settings may be limited. Interestingly, the SETs involved in the implementation of RTI were concerned mostly with PD and collaboration with GETs who, according to the SETs in the study, needed more support from the RTI team (e.g., SETs). The majority of participants had experienced a positive impact on their students' performance, and called for clear, practical directions on how to use RTI appropriately. This last finding is of particular interest since only one of the three schools had implemented a full-fledged RTI approach. Finally, the study mentioned that all participants were RTI team members; however, no data were provided about how long each educator had participated in the implementation.

Pyle et al. (2011) explored the experiences of GETs who participated in implementing RTI projects, and the role of teacher empowerment on the successful implementation of this approach. Teacher empowerment is described in the study as the confidence and knowledge that helps teachers to make appropriate instructional decisions, knowledge that could be enhanced via strategies such as ongoing PD. The researchers examined the perceptions of teachers who participated in a pilot RTI implementation project and found that most of the teachers who participated in the RTI

implementation felt powerlessness (i.e., less support). Also, teachers felt they needed more empowerment (i.e., ongoing PD) to implement such an approach successfully. However, there were large changes in teacher motivation, from positive in the beginning, to negative over time. This change in attitude might have been due to the fact that none of the general educators (*n*=13) had any previous experience or preparation in RTI before the piloting started. Also, some of the teachers who participated in the study did not experience the actual implementation in their school, and two of the four schools involved were only in the very beginning phases of implementing RTI. Last, the main focus of the study was on exploring only GETs in grade K-3; thus, future research should consider the perceptions of educators and the collaborative interactions between them when implementing this approach.

Robinson et al. (2013) explored the successes and challenges of implementing a problem-solving RTI model from the perspectives of teachers and administrators in two rural schools in grade K-5 following one year of piloting RTI. The results of the study were consistent with Sansosti et al. (2011), as most of participants' concerns were about EBPs, data-based decision making, professional support (e.g., PD), and collaboration. Increased paperwork was also mentioned frequently as a concern. Although the number of students who were referred and identified with disabilities decreased in comparison to the percentages of those students before and during the implementation of RTI (i.e., 17 to 3%), it is difficult to attribute this decrease to only the initial implementation of RTI. While the sample in the study included GETs and SETs, as well as school administrators, none of the participants had any previous training in RTI before the PD that they received

as part of the implementation of RTI in their schools. Furthermore, all 13 of the participants were about to complete the first year implementing RTI in their schools, and some of them were beginning teachers with only one year of teaching experience. Researchers collected data through formal interviews with each participant as well as field observations; however, the primary concentration of the study was to explore the main challenges and successes of the initial RTI implementation from educators' perceptions, especially in the pilot year. In order to obtain in-depth information about the perspectives of educators, future research should consider interviewing educators who have more teaching experience, as well as a minimum of three years experiencing the implementation of RTI in reading.

Greenfield et al. (2010) investigated educators' perspectives after one year of implementing RTI as a school-university partnership effort in one urban elementary school with a student population that was 52% ELLs. The sample was purposively selected to represent the entire school staff (i.e., n=8 out of a total staff of 26) who had participated in conducting a new RTI approach with students in grade K-5. Four GETs, two SETs, one SLP, and one reading specialist were interviewed for 45 to 60 minutes using semi-structured questions to reveal their beliefs regarding RTI implementation as a new change for school reform. The results of the study showed that most of educators expressed positive thoughts about the first year of implementing RTI. To illustrate, most educators stated that the monthly PD meetings provided by university faculty members, in which they had opportunities to get answers/advice, and ongoing PD structured weekly by the schools, enabled them to feel confident about referring only students who were in

need to the SES. Although the researchers indicated that SETs felt they understood the process of RTI implementation and moving students between tiers based on their progress-monitoring data more than GETs, only two SETs were interviewed, and one of them was working in a mainly self-contained classroom at the school; the other was working as a resource room teacher for two grades. In addition, while both GETs and SETs received ongoing PD (i.e., weekly and monthly) provided by school administrators and university faculty, GETs revealed that they needed further clarification regarding the three tiers of RTI and how to differentiate their instruction within and across tiers.

Rinaldi et al. (2011) explored the impact of a school/university RTI partnership for implementing RTI as a problem-solving model over three years. The researchers interviewed four GETs, three SETs, and a reading specialist (*n*=8), six of whom had endorsements for ELL instruction. Although the educators revealed that they were concerned about how to balance giving student assessments and instruction in the first year, the results showed that educators' perceptions and feelings toward RTI changed positively over the years. The study revealed that before the implementation of RTI, several ELLs were referred to SES when providing support in improving their English proficiency would have been more appropriate. The educators revealed that the implementation of RTI helped them to not only meet the specific needs of their ELL students, but also to decrease the number of students who were referred to SES. To illustrate, before implementing RTI, the school had the highest rate of students referred to SES in the district (i.e., 10%). All of the educators interviewed (*n*=8) said that RTI helped them to decrease the number of students referred to SES (i.e., 5% in the first year, 3% in

the second year, and 2.3% in the third year). One limitation of the study was that the sample of educators was self-selected (i.e., not random) and the participants only included GETs, SETs, and a reading specialist, and thus did not include other involved educators (e.g., CC/LC, SLP, psychologist, counselor, and principal). Also, the study did not provide enough data regarding the intervention used specifically with ELLs, despite the fact that 39% of their students were receiving ESL services. Finally, while the study mentioned that university faculty experts in RTI provided yearly 90-minute PD at the beginning of each year, there was not specific information regarding materials, activities, or training modules used in the PDs.

Printy and Williams (2015) conducted a study to explore school principals' perspectives and decision-making when implementing RTI. Six principals were purposively selected to participate and were interviewed after RTI had been implemented at their schools for three years. All of the schools were a part of a county initiative promoting RTI for all of the schools in the district. The study's aim was to better understand the principals' perspectives toward RTI, as well as factors influencing their decisions regarding the implementation of RTI in their schools. The principals felt that it was critical to involve key educators (i.e., teacher leaders) in the decision-making process within the RTI model. Also, the principals agreed that educators needed additional training to improve their skills for every level of the intervention (i.e., Tier 1, Tier 2, and Tier 3). Principals also revealed that the primary source of pressure for their teachers was evaluating the students and basing their instructional practices on test data. Furthermore, the study found that the lack of district support for principals had a negative impact on

the implementation of RTI in their schools, and led them to interpret RTI in their own way. The study was limited by the fact that the sample (i.e., principals) was not selected randomly, and there was a lack of detailed data regarding the nature of the RTI programs at each school. Also, the findings of the study were collected only through principal interviews; other educators who were part of the implementation of RTI, such as GETs, SETs, CC/LC, SLPs, psychologists, were not included.

Rationale for the Proposed Research

Although researchers have emphasized the importance of considering educators' perspectives regarding the implementation of EBPs (e.g., RTI) as a way to close the historical gap between research and practice in the field of SES (Cook & Odom, 2013; Fixsen et al., 2013; Printy & Williams, 2015), the studies just reviewed, while focusing on educators' perspectives about the implementation of RTI (e.g., Greenfield et al., 2010; Pavri, 2010; Pyle et al., 2011; Robinson et al., 2013; Sansosti et al., 2011), are relatively few in number. In addition, five studies explored educators' perspectives after only one year of implementing RTI (i.e., initial/establishing year; e.g., Greenfield et al., 2010; Pavri, 2010; Pyle et al., 2011; Robinson et al., 2013; Sansosti et al., 2011). Only two studies explored educators' perspectives after three years of RTI implementation (i.e., Printy & Williams, 2015; Rinaldi et al., 2011), and these studies did not involve all of the key educators involved in the implementation, thus representing a potentially fragmented view.

The failure to include all of the educators involved in implementing RTI neglects the collection of valuable information about the extent of their collaboration, a matter of

special importance under IDEA (2004), in which all educators are required to instruct students collaboratively in the LRE (Fuchs, Fuchs, et al., 2012; Yell, 2012). Only Greenfield et al. (2010) and Rinaldi et al. (2011) focused on exploring GETs and SETs' perspectives on their collaborative relationship. One other study focused on both GETs and SETs, as well as the schools' administrators (i.e., Robinson et al., 2013), but the main goal of that study was to gain educators' thoughts about the challenges and successes of the first year of implementation. The remaining studies focused on SETs' perspectives (i.e., Sansosti et al., 2011), or either only SETs (i.e., Pavri, 2010) or only GETs (Pyle et al., 2011); whereas, the study by Printy and Williams (2015) focused only on principals' perspectives toward the implementation of RTI. Last, and perhaps most important, none of the studies reviewed conducted fidelity of treatment observations as part of their research. The extent to which schools are implementing RTI with fidelity is a key factor to consider when interpreting educators' perceptions of the implementation process.

Research Questions

RTI's true potential as an EBP model cannot be reached without better understanding its implementation through the eyes of educators, such as GETs, SET, CC/LC, SLP, psychologist, counselor, and school principal. The purpose of this study was to explore educators' perspectives regarding the implementation of RTI in schools that have implemented RTI in grades K-2 for three years through the lens of Implementation Science. The research questions are:

Research Question 1

According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention?

Research Question 2

To what extent is the school implementing RTI with fidelity and sustainability?

Summary

Many schools are using RTI as an early prevention model to decrease the number of struggling readers in general, and, by so doing, reduce the number of students from being identified as having LD in particular. The literature regarding the implementation of RTI indicates a general lack of uniformity in RTI implementation. Indeed, differences exist in the number of Tiers implemented, the materials used within each Tier, the type and duration of PD, and the type and frequency of evaluating students' performance (e.g., universal screening, progress monitoring). Moreover, in many studies, there has been a lack of sufficient data regarding the fidelity of the intervention of each Tier, as well as the qualifications of educators responsible for the implementation of the RTI program.

Despite the fact that since 2004, many studies have been published regarding the effectiveness of the RTI approach, fewer studies have explored validated procedures for implementing RTI. One promising system of implementing practices such as RTI is Implementation Science, a model of implementation designed to study and improve

implementation of evidence-based or evidence-informed practices in the real world. As educators play an essential role in the implementation process, considering their perspectives through the lens of Implementation Science could help in promoting the appropriate implementation of RTI, as well as provide schools' administrators, researchers, and policymakers with insights regarding the effectiveness of school reform in general. Indeed, educators' acceptance, feelings, and commitments toward the implementation of EBPs are key factors influencing the sustainability of appropriate implementation. Despite the importance of educators' perspectives, only seven studies have explored their perspectives toward the implementation of RTI. This study adds to the literature by examining, through the lens of Implementation Science, the perspectives of a range of educators who have worked together to implement RTI over a period of three years. The study also includes measures of treatment fidelity and student outcomes to enhance interpretation of the findings. The following chapter presents the methodology used in the study, as well as the procedures for data collection and analysis.

CHAPTER III

METHODOLOGY

As Chapter II demonstrated, there are relatively few studies (i.e., seven studies) that have addressed educators' perspectives regarding the implementation of Response to Intervention (RTI). Five studies reviewed were conducted only after the first year of implementing RTI (e.g., Greenfield et al., 2010; Pavri, 2010; Pyle et al., 2011; Robinson et al., 2013; Sansosti et al., 2011), whereas only two studies were conducted following three years of implementation (i.e., Printy & Williams, 2015; Rinaldi et al., 2011). However, none of the seven studies reviewed included a range of educators involved in the same implementation of RTI, thus reducing the breadth of perspectives necessary to better understand the implementation process. In addition, no other studies have observed the school(s) under study actually implementing RTI, fidelity of treatment information is also important for interpreting educators' perceptions about the implementation process.

The purpose of this study was to explore educators' perspectives regarding the implementation of RTI in a school that has implemented RTI in grades K-2 for three years through the lens of Implementation Science. The research questions are:

1. According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and

coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention?

2. To what extent is the school implementing RTI with fidelity and sustainability?

The remainder of this chapter explains the research design of the study. First, an overview of transcendental phenomenological research and the bracketing of researcher biases are provided. Next, the participants are described, followed by a description of data collection methods and instrumentation, as well as the methods used for analyzing the data, trustworthiness and ethical concerns are discussed next, and the chapter concludes with a brief summary.

Research Design

Qualitative research designs are used to better understand the meanings and interpretations participants give to a certain phenomenon (Creswell, 2013; Maxwell, 2013). In this study, the phenomenon is the implementation of RTI as seen through the lens of Implementation Science (Fixsen et al., 2013, 2005). Within phenomenological research, there are two main approaches: hermeneutical phenomenology and transcendental phenomenology (Creswell, 2013). While both types of phenomenological research aim to study lived experiences, hermeneutical phenomenology focuses more on the researcher's interpretation of themes revealed through texts, whereas transcendental phenomenology describes the experiences of participants while acknowledging the researcher's biases (Creswell, 2013).

A transcendental phenomenological design was chosen for this study because the voices of educators who are implementing RTI on a day-to-day basis were present in relatively few numbers in the literature (e.g., Greenfield et al., 2010; Pavri, 2010; Printy & Williams, 2015; Pyle et al., 2011; Rinaldi et al., 2011; Robinson et al., 2013; Sansosti et al., 2011). Transcendental phenomenological research allows the researcher to learn more about what participants have in common and "describes the common meaning for several individuals of their *lived experiences* of a concept or a phenomenon" (Creswell, 2013, p. 76).

Transcendental phenomenological research originated with the work of Edmund Husserl and is an approach that allows for the description and exploration of a phenomenon (e.g., educators' experiences implementing RTI) through the eyes of participants with minimal interpretation from the researcher (Laverty, 2003). There are three main components to phenomenology according to Husserl: intentionality, intuition, and the epoché process. Intentionality relates to the consciousness and how the reality of an object is intertwined with one's experiences with and consciousness of that object (Creswell, 2013). Intuition refers to personal ideas and perceptions of an object or experience, rather than considering the object or experience from someone else's perspective (Moustakas, 1994).

Finally, the epoché process, or bracketing, refers to a researcher identifying his own personal experiences with the phenomenon under investigation in order to reduce personal biases (Creswell, 2013; Moustakas, 1994). These concepts and the act of bracketing out personal experiences are essential in order to better understand the

experience of educators implementing RTI for three years in grades K-2. Rather than using educators' experiences as only resources to implement academic/behavioral interventions (Donnell & Gettinger, 2015; Pavri, 2010), phenomenology can use educators' perspectives to generate knowledge about the phenomenon itself (i.e., the implementation of RTI; Creswell, 2013; Moustakas, 1994).

Transcendental phenomenological research falls under the constructivist paradigm (Creswell, 2013) in that it accepts multiple socially constructed realities and the impact of those realities on the interaction between the researcher and the participants who work together to co-construct knowledge of the phenomenon under investigation (Hatch, 2002). In constructivism, research assumes "relativist ontology," "subjectivist epistemology," and "naturalistic" methods (Denzin & Lincoln, 2003, p. 35). As such, a transcendental phenomenological research approach is used to examine the lived experiences and perceptions of participants, emphasizing their own perspectives of those experiences, which may contradict traditional assumptions about the shared phenomenon (Lester, 1999). The underlying principle of phenomenological research asserts that scientific investigation is valid when the data gained through the research originates from rich description that allows for understanding the essence of the lived experience (Moustakas, 1994).

Creswell (2013) chose to explain transcendental phenomenological studies based on the work of Moustakas (1994) because it includes systematic steps for data analysis and provides guidelines for writing the textual and structural descriptions. First, the researcher determines whether the research problem can best be understood by using a

phenomenological approach. Next, the phenomenon itself is identified. Third, the researcher examines philosophical assumptions and brackets out his own experiences. Fourth, data are collected from relevant participants, often through in-depth interviews. Participants are asked two general questions: "What have you experienced in terms of the phenomenon? What contexts or situations have typically influenced or affected your experiences of the phenomenon?" (Creswell, 2013, p. 81).

Other semi-structured questions can be asked, but these two form the basis for the interviews. Fifth, during data analysis, significant quotes and themes are identified. Sixth, the researcher uses these data to write a textual description of the phenomenon, as well as a description of the context or setting (i.e., the structural description). Finally, "the researcher writes a composite description that presents the 'essence' of the phenomenon, called the *essential, invariant structure* (or essence)" (Creswell, 2013, p. 82). The essence should have an underlying structure and allow the reader to understand what participants experienced. Using this interpretive framework allows the researcher to discover the varying realities of educators who have implemented RTI in reading for three years in grades K-2. As mentioned previously, this approach was chosen because little research exists regarding educators' perspectives about the implementation of RTI and the goal of this study is to fill the gap by letting educators' voices be heard (Donnell & Gettinger, 2015; Printy & Williams, 2015).

Bracketing Method Choice

When using a transcendental phenomenological research approach, the researcher must make known his personal perspectives in order to keep them from clouding the

essence of the phenomenon being investigated (Creswell, 2013; Gearing, 2004). In order to acknowledge personal biases, the researcher uses an epoché process to bracket his own opinions and keep them separate from the phenomenon and context being studied (Creswell, 2013; Gearing, 2004). As Gearing (2004) explains, "Bracketing, as in a mathematical equation, suspends certain components (i.e., internal and external suppositions) by placing them outside the brackets, which then facilitates focusing in on the phenomenon within the brackets" (p. 1430-1431).

Gearing (2004) identified six types of bracketing used in qualitative research: ideal (i.e., philosophic), descriptive (i.e., eidetic), existential, analytical, pragmatic, and reflexive (i.e., cultural). As its name suggests, the ideal form of bracketing is the "ideal" or purest form in which a researcher completely separates all internal and external beliefs from the phenomenon being studied. Descriptive or eidetic bracketing is a slightly more open form of ideal bracketing in that it attempts to be unbiased but acknowledges that presuppositions exist. Existential bracketing goes further in setting aside personal biases but knows that the researcher cannot bracket out all the suppositions of the environment. Analytical bracketing is more empirical, "attending to the interaction of the phenomenon in its immediate setting but suspending institutional and cultural conditions" (Gearing, 2004, p. 1442).

Pragmatic bracketing is more flexible than other types in that the researcher defines bracketing himself; internal and external suppositions are "dependent on and open to the researcher's design" (p. 1446). Reflexive or cultural bracketing is characterized by relativism and an identification of the researcher's personal beliefs about

the phenomenon under investigation. When using reflexive bracketing, the researcher hopes to minimize the impact of his beliefs while acknowledging that biases do exist:

> [E]xternal suppositions are not bracketed out, as it is impossible to remove the context, culture, and environment from the phenomenon. Furthermore, a researcher wants to include larger world suppositions (e.g., culture) essential to the phenomenon being investigated. (Gearing, 2004, p. 1445)

Researcher's bracketing. This study relied on reflexive bracketing throughout data collection and analysis in order to identify and minimize researcher bias while allowing the context of the phenomenon to inform the study. While bracketing can occur at different stages in the research design (Gearing, 2004), for the researcher in this study, reflexive bracketing was an ongoing process. The researcher's internal suppositions as they relate to the implementation of RTI are described below (Gearing, 2004; Moustakas, 1994). Internal suppositions include culture, personal values, history, and judgments (Gearing, 2004). In the context of the implementation of RTI in reading, most of these external suppositions could not be bracketed out because they were integral to understanding educators' perspectives.

The researcher is an international student from Saudi Arabia who is an English language learner (ELL). In 2002, he earned a bachelor's degree in Specialized Education Services (SES) focusing on students with learning disabilities (LD) from King Saud University in Riyadh, Saudi Arabia, and in 2006 earned a master's degree in SES from the University of Jordan in Amman, Jordan. While working at an elementary school in Saudi Arabia as a special education teacher (SET), the researcher dealt with the issue of over-identification of students with LD. He remembered that there were 320 students

enrolled in the school, yet more than 100 students were referred to SES as possibly having LD. Since it was a small school in a small town on the border of Saudi Arabia and Jordan, he was the only SET at the school. Thus, he had a long waiting list of students needing some type of extra support, whether they were identified as having a LD in reading or not.

The researcher was shocked by the reality of SES in the field and how different it was from what he learned in university courses and the short field experience that was part of the pre-service teacher preparation program at the university level. In the school that he worked in as a SET, any student who had any problem with his teacher was referred to him for evaluation. At the time, the qualifications for being identified as having a LD were primarily the IQ-achievement discrepancy model and criterion-referenced tests developed by the Saudi Ministry of Education. The researcher knew there was a problem because not all the students he encountered had LD in reading. It is important to note that this past experience could bias the current study in favor of RTI as a potential solution (i.e., early pre-referral intervention) to the problem of over-identification of students as having LD in reading.

The researcher was fortunate to be able to study in Jordan under the tutelage of professors with Master's and Ph.D. degrees from universities in the United States. He discovered after working with Jordanian educators and their educational system that the issue of over-identification of students with LD, including the overreferral of students to SES, was a common problem in both Saudi Arabia and Jordan. The researcher's graduate school professors told him about pre-referral interventions and about problems with

identifying students with LD. In 2007, the researcher began working at King Abdulaziz University in Jeddah as a pre-service teacher educator to help education majors become better prepared for the realities of teaching. He worked there as a lecturer for a year and a half, as well as a university supervisor for recent graduates in their pre-service training as part of the teacher preparation program at the university level. He then came to the United States in 2009 with a full scholarship from his employer to pursue his Ph.D. in SES at the University of North Carolina at Greensboro (UNCG).

Even though the researcher studied English from sixth grade through his Master's degree, he was not prepared for the intensity of English required for doctoral-level studies in the United States. Therefore, he studied at Interlink, an intensive English program at UNCG, from April 2009 to June 2010. During that time, he focused on improving his English language skills while also interacting with faculty members in the SES department at UNCG in order to plan his studies. As English was not his first language and since he had never taught in American schools, he anticipated difficulties in accurately understanding educators' comments and the workings of the school system in general. For example, during classroom observations, he could have recognized something as being unusual when, in fact, it was a normal part of K-2 education here in the U.S. Likewise, during the interviews, he might not have fully understood some cultural references or nonverbal interactions due to his own cultural background.

This lack of knowledge of the cultural context could have been a potential source of error in both the data collection and interpretation phases of the current study. Using peer checking with his adviser as well as colleagues who experienced teaching in

American schools and who were also familiar with the implementation of RTI approach helped to reduce the effects of cross-cultural misunderstandings such as these (Creswell, 2013; Maxwell, 2013). Since his first semester in the SES program, the researcher had been impressed by the reading he has engaged in regarding the potential for RTI to help students receive quality instruction using evidence-based practices (EBPs) provided by highly qualified teachers as early as kindergarten (Cortiella & Horowitz, 2014; Fuchs & Deshler, 2007; Vaughn & Fuchs, 2003; Printy & Williams, 2015), instead of using the traditional IQ-achievement discrepancy "wait to fail" model for identifying students with learning disabilities (Cortiella & Horowitz, 2014; Vaughn & Fuchs, 2006).

Two influential classes for him were SES 750: Introduction to Doctoral Studies in Special Education with Dr. Marilyn Friend, and SES 643: Issues in Educating Individuals with Special Needs with Dr. William Bursuck. At that time, part of the course with Dr. Friend required the students to begin developing their research interests, which led him to explain that he wanted to combine early intervention with LD. Thus, she told him to discuss this idea with Dr. Bursuck and read about the RTI model. Fortunately, one of the issues in the course with Dr. Bursuck was RTI, a new concept for him at the time, since RTI is not yet used in any of the Middle Eastern countries. Because of this reading, the researcher could be biased in favor of the use of RTI since most of his course projects were about RTI in reading and its implementation in grades K-2. The researcher also participated in preparing and directing a multi-tiered reading intervention program similar to RTI at a local private school in Greensboro, N.C., attended mostly by students who were ELLs from an Arabic/Islamic cultural background. All of these experiences have

led to favorable beliefs about RTI, which could in turn bias the way this research was conducted and interpreted (Creswell, 2013; Gearing, 2004). Bias in qualitative research can best be minimized by a rigorous methodology, the specifics of which, for this study, are described in this chapter.

Participants

Due to the fact that the aim of the present study was to better understand the implementation of RTI from the perspectives of educators who had participated in the implementation of this approach for three years, the challenge of beginning the present study was finding a school and staff of educators that had implemented RTI for three years. The fact that the principal investigator of this study is an international student who has never taught at U.S. schools, made the process of linking up with an appropriate research site more difficult. The researcher was fortunate that his advisor and other members of his doctoral studies committee helped him find a school that had been implementing RTI for three years, and had educators who had participated in the implementation of RTI for three years. After finding the school, the researcher and his advisor Dr. William Bursuck contacted the school principal to meet with him in July, 2015, in order to learn about their implementation of the program and whether or not the school would be a good fit for this study. After that meeting, they decided that the school met the study criteria.

Selection Criteria

Because phenomenological studies require rich, in-depth information from people who have experienced the phenomena being examined (Creswell, 2013), a purposive

sampling strategy was used to select the school and the participants in this study. First, an elementary school was selected that had implemented RTI for reading in grades K-2 for three years. Participants were selected based on their willingness to participate by signing the consent form after reading the recruitment script and included:

1. Certified, highly qualified general education teachers (GETs) and SET who teach students in grades K-2 and have had experience implementing RTI in reading in the same school for three years;
2. Certified, highly qualified other school personnel such as curriculum coordinator/literacy coach (CC/LC), speech language pathologist (SLP), psychologist, counselor, and principal who participated in the implementation of RTI in reading for three years.

Selection Procedures

Before conducting the study, in the beginning of the fall semester of 2015, the researcher obtained the pending approval of the Institutional Review Board (IRB) at UNCG. After receiving the pending approval from UNCG's IRB, the researcher submitted the research proposal to a school district board located in the southern part of the United States, and obtained their permission to conduct the study on October 8, 2015. The window to conduct the study in that school district was October 2015 through April 2016. The researcher then submitted the final approval form issued by the school district to the IRB at UNCG and received the final approval to begin conducting the study on October 15, 2015.

After obtaining the final approvals from both the school district and the university's IRB, the researcher prepared more than 30 recruitment scripts along with consent forms and gave them to the school principal to distribute to his staff members who met the selection criteria to participate in the research study. The researcher asked the principal to assist in the selection of a variety of educators (i.e., both teaching and non-teaching) in the school, and specified that at least two GETs per grade level (i.e., K-2) were preferable. Also, the researcher specified to the principal that the sample should include at least one non-teaching educator in the following disciplines: CC/LC, SLP, psychologist, counselor, and principal. The principal assisted the researcher to find twelve members of the school staff who then agreed to participate in the study and signed the consent forms (i.e., six grade K-2 GETs with two from each grade, one SET, one CC/LC, one SLP, one psychologist, one counselor, and the principal) (N=12). Upon verifying the qualifications of those who had provided written consent to participate, a final list of participants was constructed for the study (i.e., 12 educators).

The researcher visited the school to meet with educators who had agreed to participate in the study to clarify its purpose. Each participant received a $100 Visa gift card for participating in the study. The researcher included GETs and SET in the study in order to provide more varied perspectives, as the nature of RTI requires them to work collaboratively, especially with struggling readers (Bursuck & Damer, 2015; Fixsen et al., 2013; Fuchs & Deshler, 2007). The inclusion of administrators and other personnel provided in-depth data about the impact of RTI implementation over time and the collaborative leadership efforts among school staff to implement RTI with fidelity and

sustainability (Fixsen et al., 2013, 2005; Fuchs, Fuchs, et al., 2012; Printy & Williams, 2015). By involving a variety of school staff, the phenomenon under investigation (i.e., the implementation of RTI in reading in grades K-2) can be understood from multiple educators' perspectives (Creswell, 2013).

School Description

The study was conducted in a large urban public K-5 elementary school. The school was a Title I school, 100% of whose students received free/reduced lunches. The total number of students attending the school during the 2015-16 school year was 668; 335 of the students were boys and 323 were girls. With respect to key demographics, 67% of the school population was Hispanic, 25.9% was African American, 4.2% was white, and 3.2% was classified as other. Due to the fact that the majority of the school population was ELLs, 40% of the school population was receiving English as a Second Language services (ESL). Over the past 11 years, the number of students who were from a Hispanic background increased by almost 20%, whereas the attendance of African American students decreased by almost 20%. The enrollment of white and other students remained approximately the same over the past 11 years (see Figure 5).

The percentage of students receiving free/reduced lunches had consistently increased over the past 15 years, from 70% in 2000 to 96.4% in 2015. Data from the most recent school report card (i.e., 2014-15) showed that the size of the student body was greater compared to district and state averages (see Figure 6).

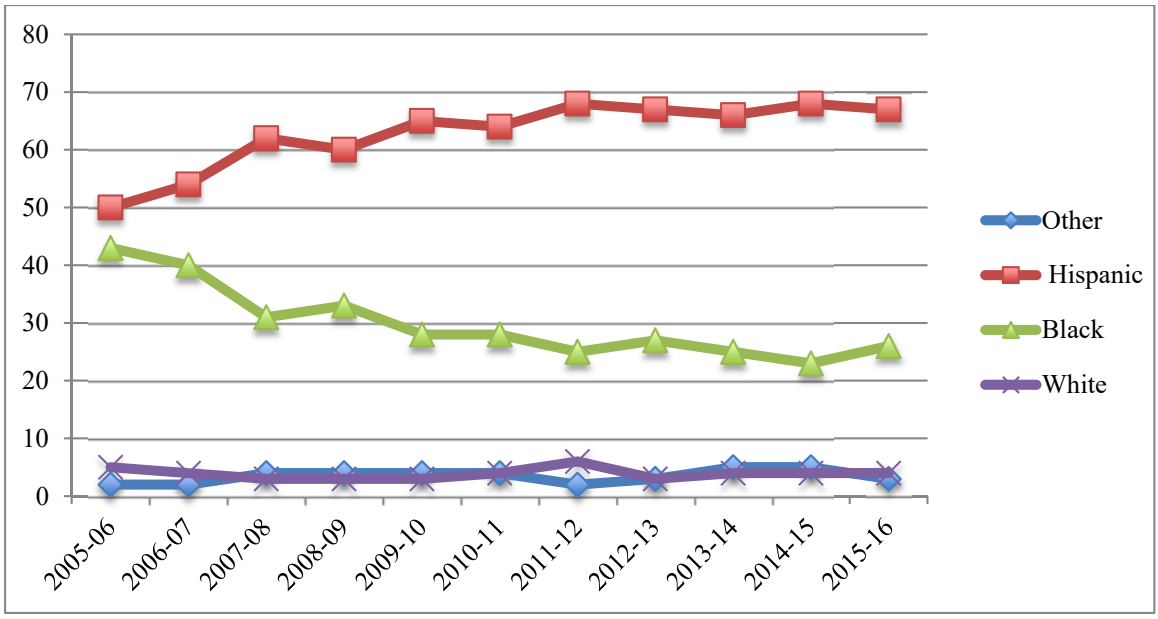

Figure 5. Enrollment by Race/Ethnicity over Time.

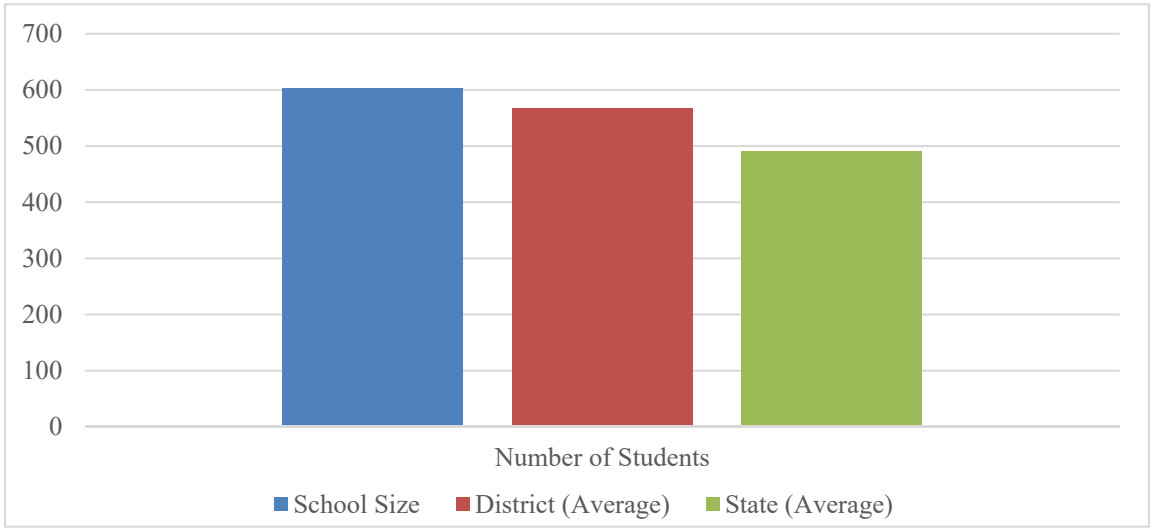

Figure 6. Comparison of School Population with School District and State.

In the past few years, the school was labeled a struggling school. As a result, it was one of the three schools selected by the district to receive a $19 million federal grant (i.e., teacher incentive fund [TIF]). The grant provided assistance to support

administrators and staff working with students in poverty, helping with the retention of highly qualified school staff, and implementing the RTI program to increase the performance of students in reading on the state end of grade reading test (EGT). According to the most recent EGT data in reading for the year 2014-15, students at the school were performing on average, below the rest of the district and state, having a greater number of students at lower achievement levels (Levels 1 and 2), and fewer at higher achievement levels (Levels 4 and 5; see Figure 7).

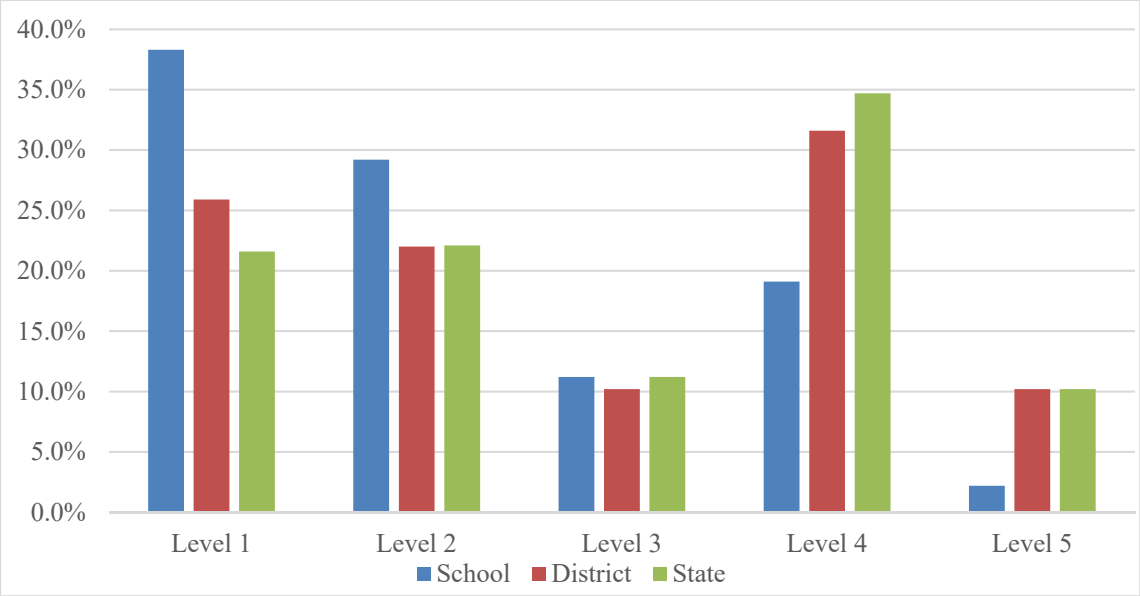

Figure 7. Comparison of School EGT with School District and State.

The school has 65 teachers, all of whom were highly qualified and state certified, as well as 25 teacher assistants that were all classified. To be designated as classified, teacher assistants had to have at least 48 hours of education college credit and two years of experience working with children in education settings. The grant provided the school with several professional development (PD) sessions to prepare educators to work with

students in poverty, as well as materials, books, technology, and other resources needed to implement RTI, including providing money for hiring and training classified teacher assistants to support the school staff in program implementation.

A portion of the grant money allowed the principal to pay some of the staff assigned to play a leadership role extra money (i.e., SET/interventionist, CC/LC, and counselor). The data from the most recent school report card (i.e., 2014-15) showed that the school has a high percentage of fully licensed teachers, as well as highly qualified educators, compared to the district and the state. In addition, the number of educators with advanced degrees in this school was higher than either the district or the state. Finally, school had a turnover rate lower than either the district or the state (see Figure 8).

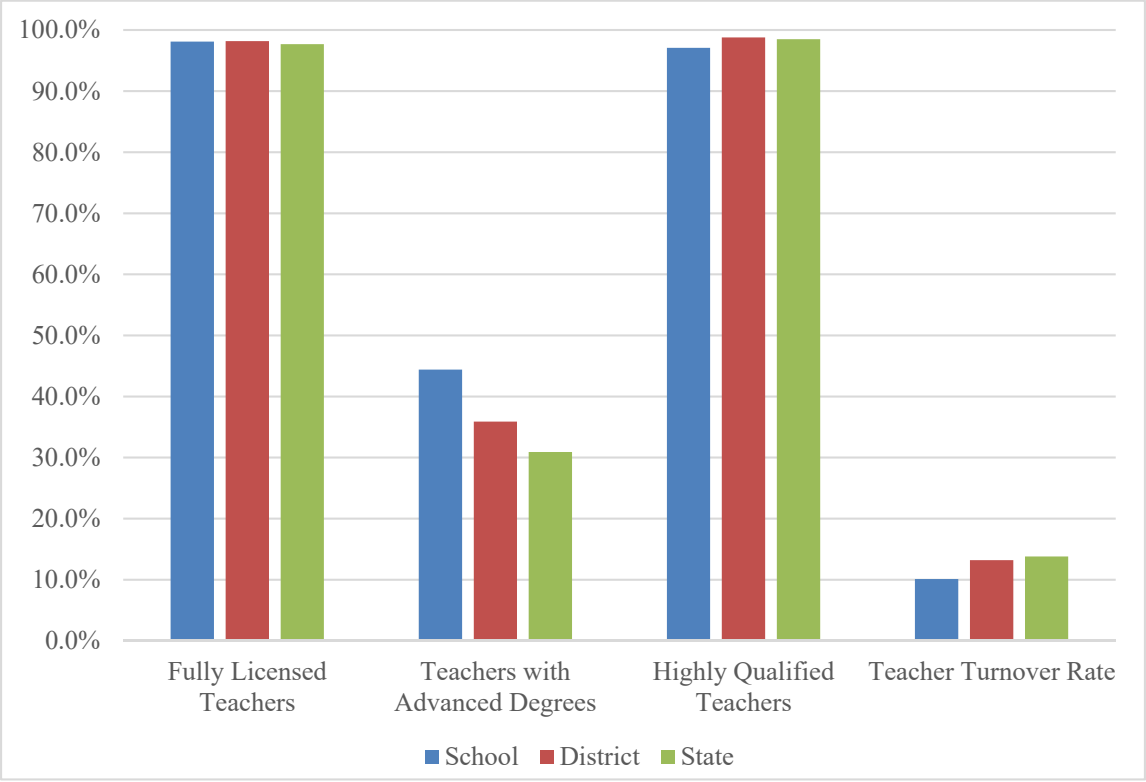

Figure 8. Comparison of School Educators across School District and State.

The lower percentage of turnover among teachers could be due to the federal grant (i.e., TIF) allowing the school administration to increase the salaries of staff involved as well as the other educational supports just mentioned. The grant also provided funding to send some of the staff to national conferences related to the implementation of RTI, working with at-risk students, SES, and ESL services. The expectation was that staff attending conferences would share what they learned with their colleagues upon returning.

The school had two main weekly meetings as part of RTI. The CC/LC was responsible for leading the professional learning team (PLT) weekly meeting with GETs at each grade level. Whereas, the school counselor was responsible for leading the intervention support team (IST) committee meeting (i.e., RTI team meeting) that was conducted weekly to discuss any students who were not adequately responding to the most intensive intervention provided in the general education classrooms (i.e., Tier 2 intensive) and who were in need of being referred by the GET. The SET/interventionist was assigned to be a teacher leader (i.e., interventionist) who helped GETs to prepare their interventions with each student in all three Tiers, and conducted workshops and PDs regarding the implementation of RTI for GETs and other school personnel when needed.

RTI program description. The RTI program at this school was structured to be a three- Tiered intervention approach, where Tier 1 (i.e., whole group reading time) was provided by GETs using the Common Core curriculum standards and a variety of different materials including basal readers. This standard-driven time lasted for about an hour daily. Then, Tier 1+2 (i.e., guided reading time) was carried out for an additional

daily hour of reading instruction; guided reading time was designed based on individual student needs and involved using Direct Instruction materials such as *Reading Mastery* and *Corrective Reading*, taught in small groups based on student performance in Dynamic Indicator of Early Literacy Skills (DIBELS), Text Reading and Comprehension (TRC), and Direct Instruction placement tests (see Table 1).

Table 1

Description of RTI Program at the School Where the Study was Conducted

Tiers	Setting	Attended by	Provided by	Materials used	PEP	IEP
1. Tier 1	General education classroom	All students, even those who need SES or ESL	Only GETs	Common Core curriculum and basal readers (i.e., EBPs)	No	No
2. Tier 1+2	General education classroom	All students, even those who need SES or ESL	GETs and some classified teacher assistants	Common Core curriculum, reading mastery, and corrective reading (i.e., EBPs)	Yes	No
3. Tier 2 intensive	General education classroom	All students, excluding those needing SES or ESL	GETs and some classified teacher assistants	Common Core curriculum, reading mastery, and corrective reading (i.e., EBPs)	Yes	No
4. Tier 3	Resource room or SLP office	Only students needing SES or ESL	SETs or SLP	Depending on each student's needs and goals using (i.e., EBPs)	Yes	Yes

The school added an additional hour to the master schedule each day called Intervention and Enrichment (IE) time (i.e., Tier 2 intensive), which was more intensive instruction using small groups and occasionally one-on-one instruction. During the Tier 2 intensive, the GETs of each grade level clustered and exchanged struggling students

across classrooms in order to focus on specific targeted skills. To illustrate, during the PLT weekly meeting, one GET may choose to work with students who need extra support in fluency, another GET of the same grade may decide to work with students who need extra support in comprehension, and another GET then works on phonemic awareness, phonics, and vocabulary. Exchanging students allowed the GETs to focus on all students in the same grade level, facilitating the provision of constructive suggestions for all students, not just his/her own, during the PLT weekly meetings (see Table 2).

Table 2

Description of Team Meetings as Part of the RTI Program at the School

Meeting title	Led by	Attendance	Meeting goals	Frequency
1. RTI team (i.e., IST)	Counselor	Referred GETs, psychologist, SET/ interventionist, SLP, and counselor.	• Review and evaluate the PEPs goals and determine unresponsive students in Tier 1+2 or Tier 2 intensive. • Evaluate the effectiveness of interventions provided by GETs (i.e., fidelity of implementation). • Come up with a new set of Tier 2 intensive interventions and determine how to deliver the chosen intervention and monitor the progress • Refer students for more psychological or language testing and then Tier 3 provided by SES or SLP.	Weekly
2. PLT	CC/LC	GETs for each grade level at a time (i.e., one meeting for all GETs of each grade) and CC/LC.	• Review the performance of students in all grades on DIBELS and TRC. • Cluster the students who share similar needs in all classes in each grade level to exchange students during IE time (i.e., Tier 2 intensive). • Design interventions for all students in Tier 1, 1+2, and 2 intensive.	Weekly

Tier 3 students were pulled out of the classroom during Tier 2 intensive to receive SES; students who were qualified/classified as needing ESL services were pulled out as

well to receive the needed services by SLPs. In this way, students had additional chances to receive reading instruction at their grade level, whether (a) in the whole group reading (i.e., Tier 1), (b) the guiding reading (i.e., Tier 1+2), or (c) the IE time (i.e., Tier 2 intensive). In each phase, the GETs and/or teacher assistants were still assessing the students' performance using the DIBELS and TRC and providing interventions based on each student's needs as documented in their Personalized Education Program (PEP).

Although PEPs were no longer required by educational laws in the state, the GETs at this school were required to write PEPs for any student who performed below his/her grade level. PEPs had detailed information about the student's performance and directly focused on the student's lowest skill level in an effort to provide interventions that would improve that area of deficit and monitor his/her progress to increase his/her test scores (e.g., DIBELS and TRC). Afterward, the PEP focused on the student's next deficiency and built on those skills until the student was able to catch-up and start performing at his/her grade level or even above grade level if possible. It is important to note that the PEPs were for students who were not yet qualified for SES as they were designed for any student who was struggling to perform at grade level.

Participant Description

As mentioned earlier, 12 participants were identified to participate in this study. All participants were white, spoke English as their native language, were highly qualified and state certified, and had at least a bachelor's degree (N=12); eight of the educators held a master's degree. The demographics for all 12 participants are summarized in Table 3.

Table 3

Participant Demographics (*N*=12)

Demographic	GET Grade K	GET Grade K	GET Grade 1	GET Grade 1	GET Grade 2	GET Grade 2
Years of teaching reading	33	12	13	4	4	6
Years on RTI	3	3	3	3	3	3
Part of RTI Leadership Team?	NO	NO	NO	NO	NO	NO
Years of teaching experience	33	14	13	4	4	6
Educational Background (Degrees)	BS & Master Elementary Education	BS, Master of Arts in Teaching	BS in Education	BA in Elementary Education	BA Sociology 2004, BA Elementary Education 2011	BA & Master in Elementary Education
State Certified?	YES	YES	YES	YES	YES	YES
Area of Teaching Licensure	Early Childhood Education	Elementary Education K-6	Elementary Education K-6	Elementary Education	K-5 Education	Elementary Education
National Board Certified?	NO	NO	NO	NO	NO	NO
Gender	F	M	F	F	F	F
Ethnicity	W	W	W	W	W	W
Native/First Language	English	English	English	English	English	English

Table 3

Cont.

Demographic	SET K-5	CC/LC K-5	SLP K-5	Psychologist	Counselor	Principal
Years of teaching reading	13	14	NA	NA	NA	NA
Years on RTI	3	3	3	3	3	3
Part of RTI Leadership Team?	YES	YES	NO	NO	YES	YES
Years of teaching experience	13	14	20	36	23	15
Educational Background (Degrees)	BA in Psychology and Special Education, MA in Special Education	BS Elementary Education, MA in Early Childhood	BS Communication Disorders, MA in SLP	BA & MA in School Psychology and Counseling	BS in Psychology, MA in Education Counseling	BA Elementary Education, MSA School Administration
State Certified?	YES	YES	YES	YES	YES	YES
Area of Teaching Licensure	Special Education K-12 (LD)	Early and Middle Grade Education	Speech Pathology	School Psychology and Counseling	Education Counseling	K-6 Education
National Board Certified?	NO	YES	NO	NO	NO	NO
Gender	F	F	F	F	F	M
Ethnicity	W	W	W	W	W	W
Native/First Language	English	English	English	English	English	English

Methods of Data Collection

Although phenomenological studies depend largely on in-depth, semi-structured interviews with open-ended, broad interview questions (Creswell, 2013), classroom and RTI team meeting observations with comprehensive field notes were also used in this study (Quimby, 2012; Wolfinger, 2002), as well as student data on DIBELS and TRC over the past three years as described in the following section.

Interviews

Interviews are frequently used in qualitative research methodology because they provide direct access to participants as sources of data; in particular, interviews allow the "voices" of participants to be heard (Creswell, 2013). In this study, participants were interviewed using semi-structured interview questions (see Appendix A). Seidman (2006) suggested that each interview in phenomenological studies take at most 90 minutes. However, the average length of interviews in this study was 35 minutes. Interviews were recorded electronically using two devices (i.e., a digital voice recorder and an iPhone app; Creswell, 2013; Maxwell, 2013). To prevent bias, interview questions were designed to be neutral and allow for educators to express their own opinions. The questions developed were double checked for trustworthiness by experts in the field prior to being piloted. Specifically, the interview questions developed were validated by Dr. Dean Fixsen, the creator of Implementation Science (i.e., the conceptual framework for this study; Fixsen et al., 2013, 2005), and then were piloted to meet the trustworthiness requirements of the study (Creswell, 2013; Maxwell, 2013).

Interview questions were based on categories that reflected the seven components of the conceptual framework of this study. Thus, different categories of participants were asked different questions depending on their role in the implementation process. Since the underlying theory and the conceptual framework of this study is Implementation Science, interview questions reflected the seven core components of Implementation Science: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention (see Figure 4 in Chapter II; Fixsen et al., 2013, 2005). Each participant was asked about each of these components and their relation to the implementation of RTI from educators' perspectives. Questions were highly focused to maximize efficiency of time, and the same researcher (i.e., the author of this dissertation) conducted all interviews to ensure there were no deviations from the interview protocols (Creswell, 2013; Maxwell, 2013).

In addition to the primary interview questions, follow-up probes were used in order to gain more nuanced information from participants (Creswell, 2013). Examples of the probes include:

- Can you tell me more about . . . ?
- How did that make you feel?
- Why do you think ___ happened?
- How were those decisions made?

The interview questions were piloted by interviewing persons who were similar to participants in the study during a pilot phase to see if the questions were clear and

understandable and could provide answers to the main research questions in the study. The interview questions, as well as the probes were piloted with participants who were doctoral students in the School of Education at UNCG who had met the primary selection criterion of having experience with the implementation of RTI. The persons who participated in the pilot phases were asked the interview questions by the author of this study using the same interview protocol; the questions were asked in the same order and recorded using the same procedure (i.e., a digital voice recorder and an iPhone app) (Creswell, 2013; Maxwell, 2013).

Afterward, the author gave each person who participated in the pilot phase a form with a list that included the same questions that had been asked to them. Then, under each interview question there was a box (i.e., checklist along with comment space) asking if the question was clear, not clear, and if the participant had any additional comments about each interview question. This helped the researcher to identify problems regarding the clarity and length of each interview question. As a result of the piloting, one interview question was believed to be too long and was divided into two separate questions. Although persons who participated in the pilot phase met the selection criteria and were similar to the actual participants in this study, none of them participated in this study (Creswell, 2013; Maxwell, 2013).

The actual interviews were conducted with all participants (N=12) between November 2 and December 9, 2015; the length of each interview ranged from 20 to 51 minutes. The average length of interviews was 35 minutes, and the total length of all interviews for all 12 participants was seven hours. All the interviews were conducted

following the interview protocol, and they all took place in the principal's office or other quiet offices within the school (e.g., Guidance office). To make sure that the participants' experiences while conducting the interviews were not portrayed inaccurately in the data analysis and interpretation phases of the study, the researcher used two steps that helped the participants understand the research goals before conducting each interview. The first step was describing the research topic and goals in the recruitment letter that every participant received as an attachment to the consent form. The second step, which took place before each interview, involved the researcher taking roughly 5-minutes to break the ice, build trust and make the participants feel comfortable by verbally reviewing the purpose of the study (Maxwell, 2013). In addition, the researcher mentioned that after the data were transcribed, each participant would receive a copy of the interview transcript for their review and clarification (i.e., participant checking) before the researcher analyzed their interview data in the study (Creswell, 2013; Maxwell, 2013). This participant check served as a type of respondent validation strategy to increase the trustworthiness of the interview data. The participants were also told that there were no right or wrong answers to the interview questions, and that the main goal of the study was to highlight the educator's perspectives toward the phenomenon under study (i.e., implementation of RTI) and let their voices be heard in order to improve the future implementation of such approaches (Creswell, 2013; Maxwell, 2013). Interviews were conducted prior to the classroom and team meeting observations in order to break the ice and build trust (Maxwell, 2013). The complete interview protocols and questions are shown in Appendix A.

Observations

Two types of observations were used in the study: classroom observations of reading instruction conducted in the Tiers, and observations of two RTI team meetings. The goal of these observations was to gain more field data about the context of the phenomenon, its relationship to treatment fidelity (i.e., classroom observations), as well as the collaborative decision-making efforts among educators (i.e., team meeting observation). Both of these observations tools are described next.

Classroom observations. The researcher observed GETs' fidelity of implementation of the RTI three-tiered model using EBPs (Bursuck & Damer, 2015; see Figure 2 in Chapter II). For these observations, the observation protocol used was adapted from one originally developed by Vaughn and Briggs (2003; see Appendix B). The instrument was originally designed as a means to determine the fidelity of reading instruction for ELLs, with a particular focus on measuring EBPs for reading within a multi-tiered model. This observation protocol has six main components: (a) instructional practices, (b) interactive teaching, (c) adaptation for individual differences, (d) general instructional environment, (e) English language development, and (f) content-specific to reading/language art. Each component has between two and ten items, all of them focused on the reading instruction fidelity specifically for ELLs. The instrument specified EBPs such as five components of reading (i.e., phonemic awareness, phonics, fluency, vocabulary, and reading comprehension), as well as the extent to which students' native language was used when teaching reading (Vaughn & Briggs, 2003; see Appendix B).

At the conclusion of each GET interview, the researcher asked each of the six GETs who participated in the study for permission to observe them during the implementation of RTI in their classroom. After getting the agreement of all GETs, the researcher randomly selected three of the six GETs, one educator per grade level (i.e., one GET from grade K, one from first grade, and one from second grade). All classroom observations were conducted between November 12 and 24, 2015. Each GET was observed three times for a total of nine observations. Each observation ranged from 45 minutes to one hour. The average length of the observations was 56 minutes.

The researcher observed each GET three times, once during the whole group reading class (i.e., Tier 1) provided by only the GET of that class, once during the guided reading (i.e., Tier 1+2) provided by the GET with some classified teacher assistance, and once during IE time (i.e., Tier 2 intensive) provided by the GET and up to three classified teacher assistants. During each observation, the researcher used the classroom observation protocol that included a checklist of behaviors, whether they were observed, not observed, or not applicable, as well as space to write comprehensive field notes. The percentage of teaching behaviors present in each category, as well as the overall percentage of observed teacher behaviors constituted the main fidelity of implementation measure for reading instruction. The researcher also used a comprehensive field note strategy to supplement the observations. The field notes will be described in more detail later.

Team meeting observations. The researcher also observed two RTI team meetings (i.e., IST committee) using a team meeting observation format adapted from

Martin et al. (2006) to gain further information about the collaborative decision-making roles of teaching (i.e., GETs and SET/interventionist) and non-teaching personnel (i.e., psychologist and school counselor) who were a part of the RTI implementation process (see Appendix C). The researcher adapted the team meeting observation format to gain insightful data regarding five of the critical components of RTI that could not be observed by the classroom observations alone (Fuchs & Fuchs, 2007; see Figure 1 in Chapter II).

The researcher asked each member of the school RTI's leadership team (i.e., CC/LC, SET/interventionist, counselor and principal) for permission to observe at least one RTI weekly team meeting. The leaders all agreed to let the researcher observe a meeting where most of the RTI team members gathered (i.e., two GETs who referred the student, SET/interventionist, psychologist, and counselor). The meeting was conducted in the Guidance office and its purpose was to discuss one of the students referred to them by the two GETs. The researcher prearranged the observation of two consecutive team meetings, December 1 and 2, 2015; the length of each team meeting was 45 minutes, and the total length of all team meetings observed was one hour and 30 minutes.

During the two RTI team meetings, in addition to filling out the team meeting observation protocol form, the researcher took comprehensive field notes related to implementation of five critical components of RTI that could not be adequately observed during the classroom observations, including universal screening and progress monitoring, data-based decision making, criteria to determine the extent to which a student was unresponsive to interventions, multidisciplinary evaluation, and special

education (Fuchs & Fuchs, 2007; see Figure 1 in Chapter II). Furthermore, the researcher also took comprehensive notes to supplement and clarify each component of the team meeting observation format (Creswell, 2013; Quimby, 2012; Wolfinger, 2002).

Field notes. The classroom and team observations were supplemented by the researcher with field notes. The researcher used a comprehensive note taking strategy whereby he took detailed notes about everything he observed. According to Wolfinger (2002), comprehensive note taking is a way to recount the entire observation in a systematic and ordered way. He states,

> In recounting entire segments of time spent in the field a researcher will often describe events that might otherwise seem too mundane to annotate. These data may later turn out to be valuable, because they can provide the contrasts that allow [a researcher] to identify deviant cases. (Wolfinger, 2002, p. 91)

Comprehensive note taking is often used to reduce researcher subjectivity (Creswell, 2013; Quimby, 2012; Wolfinger, 2002). Reducing subjectivity was especially important in this study given the fact that the researcher was from another country, a potential source of subjectivity. For example, what is typical in an American K-2 classroom might be different from the norm in the researcher's past classrooms in Saudi Arabia. Thus, an event could be falsely tagged as "deviant" when it is in fact, typical (Wolfinger, 2002). By using a comprehensive field notes strategy during the observation of all events, the researcher's personal cultural suppositions were bracketed out, allowing him to focus on the phenomena (i.e., implementation of RTI) (Creswell, 2013; Gearing, 2004; Wolfinger, 2002). The comprehensive field notes also allowed the researcher to share his observation field notes with those familiar with teaching in American

classrooms (e.g., dissertation advisor and colleagues who were former teachers) in order to identify salient events for further investigation. Participant and/or peer checking were used to increase the trustworthiness of observations field notes (Creswell, 2013; Quimby, 2012).

Student Data

In addition to the educator interviews and the classroom and RTI team meeting observations, the researcher was able to obtain student reading achievement data (i.e., K-2) measured by DIBELS and TRC over the past three years (i.e., 2013-14, 2014-15, and 2015-16). While the collection of student reading achievement data was not called for based on the research questions, achievement data were collected to better clarify the school context, and, by so doing, aid in the interpretation of the qualitative data collected. These data showed the performance of students since the implementation of RTI was started in the 2013-14 school year until the middle of the 2015-16 school year, as the study was completed before the end of school year. As described in the school's RTI program description section above, both the DIBELS and TRC were formative assessments used to measure the students' performance in reading as part of the RTI program. For students in grade K-2, the school used these two formative assessments three times per year, once at the beginning of the year (i.e., BOY), once at the middle of the year (i.e., MOY), and once at the end of the year (i.e., EOY) (see Table 4). It is important to note that the DIBELS was administered to all students, whereas the TRC was only administered to students who were struggling with reading comprehension skills (e.g., ELLs), though the number of students who struggled with reading

comprehension comprised 94% in 2013-14; 93% in 2014-15; and 94% in 2015-16 school year.

DIBELS data. Student scores on DIBELS represented a composite of six different subtests; the precise combination used depending on grade level. The six subtests included: (1) first sound fluency (FSF), (2) letter naming fluency (LNF), (3) phoneme segmentation fluency (PSF), (4) nonsense word fluency (NWF), (5) DIBELS oral reading fluency (DORF), and (6) sight word recognition (WR). All students in each grade K-2 were given a variety of DIBELS subtests, as described in Table 4 below. The DIBELS had three categories in terms of student performance, (1) well below benchmark, (2) below benchmark, and (3) at benchmark (Balu et al., 2015; Bursuck & Damer, 2015; Riedel, 2007; Samuels, 2007).

Table 4

Description of Time and Test of DIBELS and TRC

	FSF	LNF	PSF	NWF	DORF	DAZE	WR	TRC
K (BOY)								
K (MOY)								
K (EOY)								
1 (BOY)								
1 (MOY)								
1 (EOY)								
2 (BOY)								
2 (MOY)								
2 (EOY)								

TRC data. The TRC is a formative assessment mainly designed to measure the reading comprehension skills of students in grade K-2 as part of the RTI assessment package used at the school. The TRC includes passages that the student must read aloud, followed by questions regarding that passage that are answered either orally or in written English. Unlike the DIBELS that had three performance categories, the TRC had four categories based on proficiency: far below proficient, below proficient, proficient, and above proficient (Amplify, 2014; Snow, 2014).

Methods of Data Analysis

Interviews

After all 12 of the interviews were conducted, files of the interviews were sent to a paid professional transcriber (i.e., native English transcriber) who signed a confidentiality agreement form. To increase the trustworthiness of the study, before the interviews data were analyzed, the researcher used a participant checking strategy. Each transcript was uploaded to a Dropbox file where each participant received a specific link via email with a unique password to access only his/her own transcript (Creswell, 2013; Maxwell, 2013). The email stated that he/she had the right to clarify or add any comments in the transcript, as well as the right to withdraw from the study at any time. The link remained valid for a one-week period to allow for any clarification and changes. All participants accessed the link to their individual transcripts and no changes were made to the initial interview transcripts (Creswell, 2013; Maxwell, 2013).

In phenomenological studies, data analysis typically consists of creating themes and textural descriptions of the phenomenon through examination of transcripts

(Creswell, 2013; Maxwell, 2013). The interview transcripts were analyzed using two strategies: forming code and open-code (Creswell, 2013; Maxwell, 2013). The strategy used to analyze the data followed these five steps that are described below:

1. Organize the data.
2. Read the data.
3. Re-read and memo the data.
4. Describe, classify, and interpret data into codes and themes.
5. Interpret the data; a description is written to provide an overall picture of the phenomenon.

The researcher started with forming code, whereby he used the seven components of the study's conceptual framework to find evidence (i.e., significant quotes) from each transcript as a code, clustered them under specific themes and subthemes, and ended up with seven main themes representing educators' perspectives regarding each component of the study's conceptual framework (i.e., Implementation Science; Fixsen et al., 2013, 2005). In order to avoid missing any pertinent information mentioned by the educators during their interviews, the researcher used open coding with the remaining interview data. Through open coding, the researcher identified two additional themes and subthemes involving participant feelings towards the implementation of RTI and participants' concern about the sustainability of the RTI program (Creswell, 2013; Maxwell, 2013).

To increase the trustworthiness of the interview findings, after the interview data were analyzed, all emerged themes and subthemes were peer-checked with one doctoral student in the Specialized Education Services Department (SES) at UNCG who had eight

years of teaching in an American K-12 school and worked as co-chair of an RTI implementation committee at the school level for four years. The researcher considered all of her comments and clarifications and consensus was reached about all themes and subthemes (Creswell, 2013; Maxwell, 2013).

Observations

Classroom observation. Since the researcher primary experience was with Saudi Arabian schools, he was concerned that his comprehensive field notes would not identify the critical components of the instructions. Therefore, before analyzing the data collected through the nine classroom observations, a blank observation protocol along with the comprehensive field notes was peer-checked with a doctoral student in the Educational Leadership and Cultural Foundation Department (ELC) at UNCG who had seven years of teaching ESL in an American K-12 school. The colleague was asked to verify whether or not the comprehensive field notes realistically portrayed instruction in an American classroom. The colleague answered in the affirmative, thus validating the general trustworthiness of the comprehensive field notes (Creswell, 2013; Maxwell, 2013).

As described earlier, the main indicator of reading teaching fidelity was the calculated percentage of teacher behaviors present in the six main components of the observation protocol, plus the overall percentage of teacher behaviors present. Once these were calculated, the researcher asked another colleague, a doctoral student in the department of ELC at UNCG who had a Master's degree in teaching ELLs and who was familiar with the classroom observation protocol, to establish inter-rater reliability (IRR) for the observation protocol (Quimby, 2012; Wolfinger, 2002). The second observer was

given a copy of the comprehensive field notes along with a blank copy of the observation protocol. She then, based on the comprehensive field notes, checked each item within each component as (1) observed, (2) not observed, or (3) not applicable, for each of the nine observations separately. Next, the researcher used the table that he created (see Appendix D) to calculate the IRR for each of the six components, as well as an overall IRR for each of the nine observations (i.e., Tier 1, Tier 1+2, Tier 2 intensive) to increase the trustworthiness of the classroom observation data. To calculate the IRR, the researcher used the formula of the number of agreements divided by the total of the agreements plus the disagreements, multiplied by 100 to calculate the percentage of agreement (Gast, 2010, p. 159). The data collected through the nine classroom observations, the percentage of the fidelity of implementation of RTI in each Tier, as well as the IRR for the classroom observation measure are presented in more detail in Chapter IV (see Table 5 in Chapter IV).

Team meeting observation. After the two RTI team meetings, observation data were collected using the format adapted from Martin et al. (2006) to reflect the collaborative decision-making efforts between teaching and non-teaching staff, as well as the other five critical components of RTI (Fuchs & Fuchs, 2007; see Figure 1 in Chapter II). In order to decrease the researcher subjectivity and personal cultural suppositions, the researcher used two strategies before analyzing the team meeting data. First, the researcher sent the completed RTI team meeting form along with the comprehensive field notes to the chair of the RTI team meeting (i.e., counselor). She made minor changes and clarifications to the field notes (i.e., participant checking), with which the researcher

agreed (Creswell, 2013; Maxwell, 2013). Second, the researcher made a table that represented the data collected from the two RTI team meeting observations based on the other five critical components of RTI (Fuchs & Fuchs, 2007; see Table 6 in Chapter IV). Data on the table were compiled from the observation forms as well as the comprehensive field notes. The table was peer-checked with the SES doctoral student previously described in the interview section. The researcher considered all of her comments and feedback and consensus was reached (i.e., peer-checking) (Creswell, 2013; Maxwell, 2013).

Trustworthiness

There are many threats/issues facing trustworthiness in qualitative research, especially in the field of human studies; thus, it is advised to be aware of possible threats in advance and employ strategies designed to avoid them as much as possible (Creswell, 2013; Maxwell, 2013). One strategy that the researcher used in this study was the utilization of multiple and differing sources of data in different settings using a variety of instruments to collect and analyze the data (i.e., triangulation strategy) by using (a) educator interviews; (b) classroom observations; (c) team meeting observations; and (d) students' data that could increase trustworthiness of the study. During the classroom and RTI team meetings, the researcher took comprehensive field notes data that were utilized complementary to the classroom and RTI team meeting observations to check the data collected using the comprehensive field notes (Quimby, 2012; Wolfinger, 2002). Combining data from interviewing and observing a diverse group of educators allowed

the researcher to locate evidence to document a code or theme in different sources of data that triangulated information (Creswell, 2013; Maxwell, 2013).

To avoid misrepresenting participants' thoughts, the researcher used the respondent validation strategy (i.e., participant checking) to verify participants' statements. The transcripts and notes were sent to participants who were asked to check if it were accurate and to provide clarifications or additions if necessary (Creswell, 2013; Maxwell, 2013), then were altered to match the participants' responses in order to uncover the reality of the phenomenon being investigated. A third validation strategy used was peer checking, in which colleagues were asked to examine the data in order to come to a consensus about the themes, subthemes, and codes (Creswell, 2013; Maxwell, 2013). Maxwell (2013) indicated that a good way to increase the trustworthiness of qualitative research is to have numerous tables and graphs to present percentages and numbers, which will support the textural, structural, and composite descriptions, by doing so, the findings of this study are presented using tables and graphs, as well as numbers (Creswell, 2013; Maxwell, 2013).

Ethics

Pending approval to conduct this study was granted by the IRB at the UNCG in the beginning of the fall semester of 2015. The final approval from the school district to conduct the study was obtained on October 8, 2015, with a window of October 2015 through April 2016. The final approval was submitted to the IRB at UNCG as a modification and was obtained on October 15, 2015. The interview protocol was piloted with similar participants to check for validity threats and changed based on educators'

suggestions as mentioned earlier. The objective of the pilot study was "to refine and develop research instruments, assess the degrees of observer bias, frame questions, collect background information, and adapt research procedures" (Creswell, 2013, p. 165). Also, the researcher used the classroom observation protocol with similar participants in one of his doctoral projects and he was familiar with it. Further, the pilot study enabled the researcher to test the accuracy of the conceptual framework used in the study and to make necessary changes (Creswell, 2013; Maxwell, 2013).

Since this study was conducted with different educators, there was an ethical concern about the researcher's capacity to build a trusting relationship with each educator. Thus, the participating school was visited in advance to introduce the research and the goals of the study on July 14, 2015, three months before the study was conducted. Written consent forms were obtained at the introductory meeting, and interviews and observations were scheduled based on educators' preferred times and places (Creswell, 2013). Participants were required to provide informed consent prior to participate in the study; they were also informed of their rights to privacy/confidentiality and their ability to withdraw from the study at any time for any reason. In order to build trust with the educators, the interview was conducted before the classroom and team meeting observations, where the researcher was able to talk about the goals of the research, assure educators that there were no right or wrong answers, and that he was not there to evaluate them. In this way, the researcher did all he could to make them feel comfortable during the interview meetings, which in turn made them more receptive to being observed by the researcher, whether in the classroom setting or in the team meeting. Also, as mentioned

previously, the interview data, as well as the team meeting observation data, were shared with participants in order to gain clarification of the researcher's understanding of what they said, an action that increased the trust between the researcher and the participants (Creswell, 2013; Maxwell, 2013).

In addition to informed consent, the study was guided by the principles of beneficence and justice (Midgley, Davies, Oliver, & Danaher, 2014). Beneficence refers to decreasing the risks involved for participants in a study while increasing the study's potential benefits. By meeting with them at times/places convenient and comfortable for them, and allowing them the opportunity to withdraw from the study at any time, the researcher maximized the benefits to participants. Justice refers to a non-discriminatory method for selecting participants (Midgley et al., 2014). This study relied on volunteers who had met certain inclusion criteria; these criteria did not discriminate based on gender, race, ethnicity, first language, etc., but were based instead on issues relevant to the study (i.e., years of experience implementing RTI, highly qualified status, etc.). Participant confidentiality was protected by storing electronic copies of data recordings, transcripts, observations, field notes, on a password-protected laptop; hard copies of the data were stored in a locked cabinet in an office in the Department of Specialized Education Services, School of Education Building, on the campus of UNCG. Participants were de-identified unless disclosure was required by law (Creswell, 2013; Maxwell, 2013).

Summary

The current study employed a transcendental phenomenological research design to investigate educators' perspectives regarding the three-year implementation of RTI in reading in grades K-2. The researcher employed semi-structured interviews and classroom and team observations to examine the process of RTI implementation. The classroom observations were supplemented with comprehensive field notes, and student reading outcome data on the DIBELS and TRC. A variety of strategies were used to increase the trustworthiness of the findings in this study, such as triangulation, participant checking, peer checking, and numbers. The data are presented in Chapter IV and are organized thematically, beginning with the themes based on the conceptual framework of the study (i.e., Implementation Science).

CHAPTER IV

RESULTS

Conceptualization of this study emerged after a detailed literature review that found that over the past three decades the overall percentage of students receiving specialized education services (SES) under IDEA 2004 has increased from 8.3 to 13.8% (Snyder & Dillow, 2012), whereas the largest increase was in the percentage of students identified as having learning disabilities (LD; Aud et al., 2010; Cortiella & Horowitz, 2014; Zirkel, 2010). However, the LD category started to decline annually since 2002 by approximately 2%, and the most recent federal data available indicated that 42% of students receiving SES under IDEA were identified with LD (Cortiella & Horowitz, 2014; U.S. Department of Education, 2011). Furthermore, the majority of the students identified under the category of LD had reading disabilities (Cortiella & Horowitz, 2014; Fuchs & Fuchs, 2006).

In response to these issues, the 2004 reauthorization of IDEA introduced Response to Intervention (RTI) as an alternative/optional means to identify students with LD instead of the traditional IQ-achievement discrepancy approach (Cortiella & Horowitz, 2014; Yell, 2012; Zirkel, 2010). Additionally, it was designed to prevent reading problems from occurring as early as grade K (Bryant & Barrera, 2009; Cortiella & Horowitz, 2014; Printy & Williams, 2015). Preliminary data suggest that RTI can meet these goals if it is implemented properly (Bursuck et al., 2004; Cortiella & Horowitz,

2014; Fixsen et al., 2005; Flanagan et al., 2006; Fuchs, Fuchs, et al., 2012; Johnston, 2010; Vaughn & Fuchs, 2006), with fidelity and sustainability to improve the outcomes of students academically (Cook & Odom, 2013; Fixsen et al., 2013; Hargreaves, 2007; Hargreaves & Goodson, 2006; E. P. O'Connor & Freeman, 2012).

However, multi-tiered RTI's true potential cannot be achieved without better understanding its implementation from educators' perspectives. While a number of studies have examined RTI implementation from the perspective of educators, the studies have for the most part been limited to educators who have implemented RTI for only one year (e.g., Greenfield et al., 2010; Pavri, 2010; Pyle et al., 2011; Robinson et al., 2013; Sansosti et al., 2011), and have not included a wide range of educators involved in the research (e.g., Printy & Williams, 2015; Rinaldi et al., 2011). This is especially true as there is a gap in the literature regarding a variety of educators' perspectives toward RTI after multiple years of implementation (i.e., three years).

The findings of this study support a better understanding of RTI implementation as a phenomenon by using Implementation Science as a conceptual framework to understand the perspectives of a variety of educators; six general education teachers (GETs) in K-2 with two from each grade, as well as one special education teacher (SET)/interventionist, one curriculum coordinator/literacy reading coach (CC/LC), one speech/language pathologists (SLP), one psychologist, one counselor, and the school principal) who have been using it successfully for three years.

This chapter begins with background information on the research context, while the second section provides explicit links to the original two research questions. Each

section includes research findings that emerged during the data analysis through the lens of Implementation Science (i.e., conceptual framework) and its seven core components (Fixsen et al., 2013, 2005). Then, the chapter presents data regarding the fidelity of implementation of RTI in grade K-2 through classroom observations, RTI team meeting observations, and student outcome data in reading over the last three years of RTI implementation. Last, the chapter presents data regarding the sustainability of the RTI program.

Research Context

It is true that we have learned valuable information regarding the implementation of RTI from educators' perspectives through studies that implemented RTI for one year (e.g., Greenfield et al., 2010; Pavri, 2010; Pyle et al., 2011; Robinson et al., 2013; Sansosti et al., 2011) as well as after multiple years (e.g., Rinaldi et al., 2011; Printy & Williams, 2015). However, these studies were limited for the following reasons: (1) they were few in number, (2) five of the studies were limited to perspectives of educators who had implemented RTI for only one year, and (3) studies did not include all educators who were part of the implementation process, whether as teaching or non-teaching school personnel. Therefore, this study aimed to contribute to the literature in that it addressed a range of educators' perspectives towards RTI after three years of implementation.

The study was conducted in a large Title I urban public school in the southern part of the United States that was mostly attended by students who are English language learners (ELLs). The majority of the educators at the school were native English speakers who were considered to be highly qualified educators. The implementation of the RTI

program was part of a federal grant that the school received in order to help it assist with a challenging student population (i.e., ELLs) and students who were not performing at grade level on end of grade tests (EGTs).

The participants in this study were 12 educators (i.e., six GETs in K-2 with two from each grade, as well as one SET/interventionist, one CC/LC, one SLP, one psychologist, one counselor, and the school principal) who met the study participation criteria. The data for this study were collected through (1) educator interviews, (2) classroom observations, (3) RTI team meeting observation, and (4) students' K-2 data over the three years of the implementation of the RTI program on the Dynamic Indicator of Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC).

One way to learn about effective ways to implement RTI is by examining the perspectives of educators who have implemented the process through an empirically validated model for implementing Evidence-based Practices (EBPs) in school settings, such as Implementation Science (i.e., the conceptual framework of this study; Fixsen et al., 2013, 2005). Implementation Science includes variables (i.e., core components) related to (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention (see Figure 4 in Chapter II). The findings of this study were informed by the conceptual framework in many ways as it was used to develop the interview questions, as well as code the data during the data analysis process.

Interviews with educators were analyzed using two strategies: forming-code and open-code (Creswell, 2013; Maxwell, 2013). Seven main themes emerged from the

forming-code strategy, each representing one of the seven components of Implementation Science. Open-coding was used to analyze the remaining data in the interviews (Creswell, 2013; Maxwell, 2013). Open-coding revealed two additional themes: (1) educators' feelings toward the phenomena under investigation (i.e., implementation of RTI program from educators' perspectives), and (2) perceptions related to the sustainability of the RTI program after the federal grant was over. A total of nine main themes emerged from the interview transcripts of the 12 participants. Eight of these themes that relate to Research Question 1 are described first. Theme number nine is described in response to Research Question 2. Note that all themes and subthemes emerged were peer-checked with one doctoral student in the Specialized Education Services Department (SES) who had eight years of teaching experience in an American K-12 school and worked as co-chair of an RTI implementation committee at the school level for four years.

Research Question 1

According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention?

The following section outlines and organizes the seven major themes and subthemes that emerged to represent each component of the conceptual framework. Then,

the eighth theme representing educators' feelings towards the RTI program implementation is presented.

Staff Selection

Staff selection involved the extent to which participation in RTI was voluntary as well as the principal's approach to the selection of members of his RTI leadership team. These aspects of staff selection are described in the themes that follow.

Participating in RTI was not a Choice

Information related to staff selection and the roles the participants would assume in the RTI process was found throughout the interview process. All 12 educators stated that both the school and the district mandated their involvement in the implementation of RTI as part of the requirement laid out in the federal grant that the school received a few years ago. All revealed that their involvement in the implementation of the RTI program was not a choice; it was expected that all educators be involved in various ways.

For example, one GET explained that, "It's a requirement for all the teachers who are working with students to participate in this program, we all do it . . ." while another GET went into greater detail and explained that the district initiative was related to the expectation of participation when he said,

> I had no real choice in it. There was a government grant . . . It was granted to the [school district] few years ago, I think it was about a $19 million grant and there were certain schools that were selected by the district to participate so it wasn't a choice . . . RTI was part of that process and that's how we became an RTI school.

Roles in RTI were Based on Specialized Knowledge and Skills

Three educators shared that the school principal selected them to become leadership team members responsible for implementation of the program at their school (i.e., SET/interventionist, CC/LC, and counselor). Leadership roles were assigned as the administrator identified his staff's specific skills or dispositions that helped him determine what role they should take in implementing RTI. To illustrate, the school counselor, who was the chair of the RTI committee, explained, "I am the chair of the intervention support team . . . I was assigned by my principal; a lot of counselors are the chairs of the committee." Whereas the CC/LC, who was assigned to lead the professional learning team (PLT) weekly meeting as well as serving as a member of the RTI team (i.e., intervention support team [IST] committee), shared,

> My principal approached me and asked me if I would do it . . . As I became the curriculum coordinator, that was an automatic role of mine is that I was on that team to support the guidance counselor who's our RTI team chair and then also our other teachers, so I'm part of that committee now.

Similarly, the counselor expressed that the role she acquired was common based on the district's expectations. She shared that at most of the schools in the district, the counselor or the CC/LC is the one who is required to be the chair of the RTI team (i.e., IST committee). Additionally, the SET/interventionist stated that she was assigned by the principal to be one of the teacher leaders and interventionists as she explained,

> I started as an [SES] teacher, so to me the whole idea of RTI and the teacher leader position was just sort of melding the two things together, so that's how I came to be part of it . . . our principal, it was in his first year or two that this all happened . . . So I think he was the one who really made all that happen.

This role selection process was confirmed by the school principal, who indicated that, while the implementation of the RTI program did not affect his hiring practices, it led to rearranging the school staff. For example, he said that he selected three educators to be on the leadership team based not only on their knowledge of how to implement RTI, but also on their understanding of its importance teaching students to read,

> It [RTI] has definitely affected where I place people within the staff. Over the last couple of years, we've created a team [PLT] that is made up of classified and certified teachers whose main goal is going in and supporting teachers in intervention time in that guided reading block so that the interventions [Tier 1+2 and Tier 2 intensive] that we talk about when we're developing PEPs [Personalized education plan] and that process can be implemented with fidelity. So I've done some rearrangement to get some of those people that have that mindset and understand the importance of interventions on that team. I don't put people in the NO pile if they're not familiar with it because I can hear when people are talking if they have that belief that we've got to reach kids on their level in order to move them up.

Staff attitudes and beliefs related to RTI mattered to the principal, and were taken into account as well as their technical expertise in implementing the program. Still, expertise certainly matters and how educators acquired their expertise is the topic of the next theme: pre-service training in RTI.

Pre-service Training

Pre-service training referred to the extent to which educators received RTI-related training in their university programs. The amount of training varied widely by discipline and many educators offered suggestions for ways that universities could address this issue. The subthemes that follow address this theme.

Lack of Preparation in RTI at University Programs

Nine of 12 of the educators indicated that they did not receive any preparation to implement RTI at the university level, whether in their undergraduate or graduate programs. To illustrate, most GETs (*n*=5) stated that the teacher preparation program at their university was not helpful in preparing them to implement RTI successfully. As one GET explained, "Nothing, when I was in college, I had no type of RTI training. I didn't even know."

Other GETs with more teaching experience (*n*=3) revealed that they graduated a long time ago and the RTI program is considered a new approach. However, two of the GETs who had less teaching experience and graduated a few years ago revealed that while they learned the basics of teaching in their university programs, they had no preparation regarding the implementation of RTI. As one GET stated,

> We did not have RTI training when I was in school, so it was not helpful at all. We learned how to teach the basic child. I feel like we did not get a lot of training on teaching any child that wasn't on grade level, or I mean we just learned the basics . . . We had regular reading courses, we have regular math courses, but we didn't have RTI training.

The school principal stated that he was aware that the implementation of RTI was not emphasized in teacher preparation programs at the university level and thus questioned if universities were thoroughly preparing pre-service teachers in the process. As he explained,

> I don't think, looking at it generally, that's [RTI] a big topic in trainings. I have a few teachers who have just come out of college or just come through a Master's

> program . . . I don't know if colleges and universities have caught up to the RTI piece as deeply as public schools are in it at this point.

Thus, despite the fact that RTI has been in existence for over a decade, even the educators with more recent degrees were not given instruction on RTI in their teacher preparation programs at the university.

Three educators acknowledged that some information regarding RTI was gained at the university level (i.e., one GET, CC/LC, and principal). Although they revealed that their university programs provided them with limited information about RTI (i.e., background, theories), they felt it was not enough to help them to appropriately implement such an approach. For example, one GET revealed that there were no courses solely devoted to RTI: information about it was infused throughout several courses. She explained, "I don't recall a course that was just on RTI but it was more threaded throughout all of the courses . . . Our university is such [that] you're just getting the base and the foundation and it's threaded and you learn about it."

The principal felt that the teacher preparation programs focused too much on theory and abstract thinking. From the principal's perspective, "I'm used to it, I mean teacher prep programs are good for a theory and stuff, but there's always pieces that people don't pick up in student teaching or pick up in class."

Preparation for RTI at university was part of SES. Four educators (i.e., two of the GETs, SET/interventionist, and principal) said that the teacher preparation for the implementation of the RTI program was part of the SES teacher preparation programs at the university level. As one GET explained, "Unless you went into special education, you

didn't have really any courses that would help you work with intervening with a child that might not be meeting certain expectations." Another GET concurred,

> I'd heard of RTI [because] I took a special needs class in college, but that was just a general class. It did not go and highlight the implementation process and we were not given ways to explore it, we just went over what it was, the purpose of it, and that was it. But other than that I had no training in undergrad. I haven't been to graduate school, but no type of really training other than just instruction like lectures . . . that was it.

Thus, it was not surprising when the SET/interventionist said that she had received several courses in her undergraduate and graduate study that prepared her to implement some important aspects of the RTI program,

> I had a number of classes focusing on learning disabilities, and then I went to graduate school and also got my Masters in special education with reading disabilities, so I think that was a great background for going into or using RTI . . . In graduate school I specifically worked on learning disabilities, so I learned how to address students who are not performing on grade level, I was trained in programs like corrective reading and reading mastery that address students who have reading disabilities, and I learned how to work with children in small groups when they have some sort of learning disability. I learned about all the tests they're giving to students to assess learning disabilities, so I think that, from my school perspective, helped me to prepare because I understood the process of how children go from being in their general education classroom to qualifying for special education services, so I have that background from my undergraduate and graduate studies . . . So I think that was a good preparation for the intervention aspect of it, not as much for the RTI program in general but for the student aspect of it, I think I had really good training.

The principal agreed that SETs have more preparation related to RTI. He stated that he became interested in the implementation of RTI because he learned about it from his wife who works as a SET. He explained,

> I have the luxury of being married to an EC teacher, so we've kind of had discussions over the years about RTI and is it a better process than psychological testing and kind of from an EC standpoint along that spectrum is RTI a better way to get kids into the learning disability programs and those kind of things, so those discussed sparked interest in some research on my own of what RTI was and how that's implemented.

The connection of RTI-related training and coursework to SET training was therefore highlighted in these interviews. Many of the participants described this discrepancy by discussing the lack of coursework and field experiences.

Need for courses and field experience about RTI at universities. Four of the GETs thought that it would be beneficial to have more courses, and field experience as part of teacher preparation at the university level in order to learn to implement RTI more successfully. One GET clarified,

> It would have a very nice to have some sort of training that would help us work with students . . . If a child is having a certain issue with something, here's the test that will show you exactly what they're need is, and here are the specific goal that you can use with this child to meet that need. So it would've been nice to have some sort of either test or strategy or something to use, that would help us meet a child at their lowest need and help us bridge the gap between where they should be and where they actually are.

One GET described how her field experience could have been better supplemented in order to teach a wider variety of students in the classroom,

> While I was student teaching, I had some diversity but not the levels I had here my first year . . . I was at very different schools than here. I was at very higher socio-economic level schools, and it was a completely different set of demographics with parents and students, so it's like you don't know the knowledge if you're not exposed to certain situations . . . But my first year here, it was very different and I felt my first year kind of overwhelmed because I didn't have a lot of experience and I wasn't familiar with the RTI process.

The CC/LC stressed the value of the one-year field experience as part of her student teaching. She stated that during the field experience, she was exposed to several tasks and hands-on experiences that help her to be more prepared to implement the RTI program when she entered the real world of teaching. She explained,

> A lot more of my training and background came from the actual teachers that I worked with and getting the hands-on experience and getting the practice from the teachers and talking to different faculty members within the school for advice, so there was a gap but there were plenty of resources and people that I can go to . . . I think as an undergraduate you get so overwhelmed with how much you have to learn that I feel that it is appropriate for some of the intervention training to come after you start in the classroom because then you're ready for it . . . You can learn as much as you can about them in school, but until you actually put then in the practice and try them out yourself that's taken it to the whole next level.

While there is much that educators can learn about RTI in their pre-service training, schools and districts can compensate for this lack of pre-service training through in-service preparation (i.e., consultation and coaching). Results related to these aspects of RTI training are discussed in the next main component of Implementation Science.

Consultation and Coaching

Educators addressed consultation and coaching in RTI based on two different types of in-service preparation: professional development (PD) and ongoing support and training (OST). Both types of training as well as the educator's views on them are described in the themes that follow.

In-service Preparation was Helpful

Consistent with the findings just presented, two GETs, SLP, psychologist, counselor, and principal (n=6) stated that most of what they had learned about the

implementation of RTI came through two means: in-service preparation that they received in the initial PD conducted by the district prior to implementing the RTI program and OST provided by the school's trained staff. One of the GETs explained,

> I learned through professional development more in the school system instead of like in the university setting . . . I think that the more relevant coursework was not in the university setting but was in the professional development setting as I was already employed.

Similarly, the SLP said that most of what she learned about the implementation of RTI was through the PD and OST provided by the school, as well as continuing education and conferences, when she expounded, "Most of my learning about RTI probably came from the school or some continuing education like seminars. If I go to a national conference, there might be a talk on RTI and then maybe I would go to that." Likewise, the school principal shared that the five days of initial PD the staff received by the school district prior to implementing RTI at his school, as well as the OST provided by the trained school's staff, was very helpful to prepare educators. He clarified,

> Couple years ago we did a 5-day staff development on reading foundations and I think that made a big difference . . . So I'm used to kind of the on job training mindset, so I knew my vision for implementing RTI, it didn't bother me because I could instruct, I could train my teachers the way I wanted them to carry out the RTI without any baggage of what they've learned in the past.

Many educators felt that in-service preparation assisted them to feel more confident about the implementation of RTI at their school, particularly when combined with the PD provided by the district.

All educators received initial PD by the district prior to RTI. In regards to the initial PD, all 12 educators interviewed said that they had received PD three years ago. The initial PD was for five days prior to the implementation of the RTI program at their school and was provided by the district RTI expert who came into the school and did several presentations about program implementation. One GET explained,

> The . . . [District] provides the training. It comes through professionals outside our school staff. That is someone on staff in central office that provided the reading foundations . . . We've had lots of training for teaching reading and working with students who are not meeting goals. Specifically, we have taken a reading foundation, which was 30-hour class, quite lengthy, with lots of requirements so we took that class, just a couple years ago.

The principal shared that the main goal of the initial PD was to let his staff understand the process of implementing RTI.

> The first thing was the reading foundation training by the school district. If we're going to look at a true tiered model of [RTI], we've got to be able to understand what it takes to be able to read and be able to comprehend, so with a variety and wide-range of staff members who just got out of college, some of them with Master's degrees in reading education, some of them were in college 20 years ago, I knew we needed to kind of level the playing field, so that was my first thought. So a lot of modeling in the trainings, modeling how we look at data, modeling what that data tells us, and how we can use that to inform our instruction, there has been a lot of that.

In this way, the district-driven PD was used to make sure that all the educators involved in the implementation of RTI had a solid foundation of knowledge about the program, regardless of previous experience or knowledge in RTI.

Initial PD in RTI was helpful. Four GETs, CC/LC, counselor, and principal (n=7) expressed that the initial PD provided by the school district was helpful to start the

implementation of RTI at their school. For example, these educators felt it was helpful to understand the components of reading and how to teach reading using the RTI program, as well as how to diagnose and track the performance of each student. One GET said,

> It was good to look at the components of reading and how children learn to read, and we were given some diagnosis techniques for how to figure out the gaps in where children were deficient, and how we might be able to help them, so I would say it was relatively helpful.

The counselor stated that the initial PD was very helpful, especially the specific training that she received as the chair of the RTI team from the district expert. She explained, "It was very, very helpful and the most helpful part was when she came in and sat in on the individual cases that we were working on. So having someone help us in that way was very beneficial." The principal shared that the initial PD as well as other support and resources from the district helped his staff to acquire the knowledge needed to implement the RTI program.

> It was nice to have it, coming from a school that did not have a lot of professional development support money-wise or people-wise. It was good coming in and having that, knowing I had that resource so that teachers got the support and help they needed.

While these educators found the initial PD to be helpful, some critiqued its value.

Educators believed initial PD should be more explicit. Two GETs, the SET/interventionist, and the SLP (n=4) indicated that the initial PD should have provided them with more explicit information and strategies in order to implement the RTI program successfully. To illustrate, one GET revealed that after the initial PD she had

some questions about the implementation of the program, but when she asked the members of the PD team, they could not answer her questions. She described this situation, as follows.

> I remember going to other people that were maybe on more of a leadership part of that team for additional information, so I don't think I was provided with enough to be able to successfully implement it without further research on my own or without going to other people . . . We're given the training, this is what you need, here is a packet that tells you how to do everything, go and do it.

Another GET stated that the initial PD was only a PowerPoint presentation consisting of general information about RTI and that at the conclusion of the presentation, the person in charge of that PD handed each educator a copy of the PowerPoint presentation. The GET questioned, "I mean, how helpful having someone read a PowerPoint to you and hand you a copy of the PowerPoint?" Similarly, the SLP said that she still felt that she did not understand how the RTI program should be implemented appropriately and needed much more information for her to support GETs. As she explained,

> I don't feel as competent to contribute to the RTI process, because I don't think that I have necessarily a good understanding of exactly what should be done at the different levels . . . I think I still feel a little bit uncertain about providing my input and things like that, and how to support the teachers to do it.

Two GETs felt that hands-on components need to be a part of the training to help them feel like they are implementing the approach appropriately. To illustrate, one GET said,

> I'm more of a hands on person, so I would like maybe instead of just telling us this is what it looks like and this is what you do, give us like a particular

> student, like a fake student or whatever, and have a scenario where we could work together as a team maybe to practice, okay this is the data that we have on the student, and this is the next step. And then maybe work on a plan together . . . Then have us maybe do it on our own and then have that person come back and give us feedback about what we decided to do with that student and what interventions we decided to use. So was this a good choice? Will it be effective?

Most OST provided by the school, not the district. Educators expressed more favorable feelings towards the OST that was provided by the school itself. Four GETs, the SET/interventionist, CC/LC, SLP, psychologist, counselor, and principal (*n*=10) shared that OST was mainly provided by school staff who had attended district-level RTI implementation trainings and who had disseminated that information to their colleagues during OST. The staff found these sessions to be helpful. Four of the GETs received the OST during the PLT meeting led by the CC/LC, which was structured to be a weekly meeting for the GETs at each grade level. Also, the principal assigned two teacher leader/interventionists (e.g., SET/interventionist) to these sessions. These team leaders had received training by the district expert on the process of implementing RTI (i.e., one for grade K-2, one for grade 3-5).

Whenever the GETs had any issues or struggled to implement the program, they could either discuss that issue in the weekly PLT meeting or ask the teacher leader. Thus, four of the GETs indicated that the OST they received by the school's staff was helpful. As one GET shared,

> We have a leader for K-2, a teacher leader for RTI, and we have the teacher leader for grades 3 through 5 . . . If you have a question you can just stop by . . . It was very reassuring because I'm the kind of person I have specific questions, and I like to feel someone is knowledgeable about a topic, especially if you're leading a group, or a professional development, I felt like my questions were answered, so I

> felt more reassured with the whole process knowing that there was someone from the school who would help me if I needed.

Another GET described the process of the weekly PLT meeting led by the CC/LC,

> We have PLT meetings where we meet as a grade level under the supervision of our curriculum coordinator where we explore techniques and look at what's working and what's not working to help out students meet goals . . . We meet routinely as a team once a week, we get some support there and that's through our curriculum coordinator, but we're always looking at scores, thinking of our scores and what we can do to help them [Students] primarily with reading from their DIBELS and TRC scores that we collect . . . It's just a continuous ongoing process of looking at where they are going and working with interventions to help them meet their goals and then you work with those interventions a little while, you test them again. I mean it's just kind of like an ongoing cycle.

The SET/interventionist stated that her leadership role was not limited to the RTI team committee (i.e., IST) and students who were referred to SES or Tier 3, but that she was also assigned to be one of the teacher leaders/interventionists. As she said,

> Myself and another teacher here, we were both teacher leaders in this area, she and I sort of became coaches actually so we would help our coworkers, our colleagues in the implementation of RTI. So we were sort of helping people with the process of RTI, understanding how to move a student from a Tier 1 to a Tier 2, and Tier 3 as part of our [RTI] committee, teachers had concerns about a student that wasn't performing well in the regular education classroom, how to move them through the Tiers. So, we were sort of teacher leaders in that since we would help them with that process.

She added that she provided educators (e.g., GETs, and SETs) with OST to overcome any challenges that they might face in the implementation of RTI. She stated further that during team meetings she worked with educators to make data decisions involving the

movement of students between Tiers and helped SETs if the students were referred to SES (i.e., Tier 3). As she explained,

> We've helped teachers to create the paperwork, create the interventions that they need to address that student's specific need, and then we've helped them document and benchmark and go through the whole process of moving a child from Tier 1 to Tier 2 and, if needed, to Tier 3 through the RTI process, so we've done a lot of that. We helped teachers with any updates or any changes we would go to professional development and then come back and train the rest of our staff. Like this year we have a new computer program that our PEPs and our RTI process is on, so we would get training in that and then come back and train our colleagues on that, so that's sort of part of my role in that teacher leader position.

The SLP also mentioned that the RTI team members and educators were highly trained at this school and worked as a team in order to provide OST to other educators as needed in order to implement the RTI program adequately. She was able to compare her experience in other schools that had implemented the same approach, and stated that the staff of this school were more educated and had more experience as she expressed,

> I think our quality of our leadership . . . and our teachers within this school are more highly trained, competent and more supportive of each other. So I think that's why it probably is [This school] better. I think our staff is just a better staff. More educated, more experience more thoughtful about looking into the interventions.

The principal mentioned that the structure of their program allowed the school to have OST through the meetings that the school staff had as part of the RTI program, such as PLT, RTI team weekly meetings, and consultations with the teacher leaders/interventionists. He mentioned that he believed in the teacher leaders and their unique contributions to improve the implementation of such a program as he shared,

> Ongoing in our PLT meetings, we spend a lot of time talking about students that are struggling and how they might be struggling and looking at that. I'm a big believer in teacher leaders and so we established pretty early in this process teachers that I saw that understood the process, so I've made them teacher leaders and paid them a stipend to take on some leadership role in the building and they've helped do professional development on small group instruction on differentiated instruction on learning centers and I try to differentiate my professional development, so it's kind of different for each grade level . . . it's really based on seeing what's weaknesses of ours and being out there and involved in discussions with the teachers and if I see that there's a need we find a professional development that will help that.

Overall, the educators found that PD and OST were helpful in overcoming challenges encountered in the implementation of RTI, although many of them had suggestions for improving these processes, whether through better pre-service teacher preparation (i.e., university programs) or through efforts by the school or district to educate staff members on components of the intervention. These feelings regarding preparedness corresponded to their assumptions regarding the ways that their roles in RTI would be evaluated, the topic of the next major theme.

Staff Evaluation

The staff evaluation process was described as lacking by all educators since there was no formal evaluation process for their roles in the RTI program. However, some educators expressed a desire for some sort of mechanism by which their progress could be monitored in order for them to know if they were doing what they are supposed to do. Educators also offered a variety of informal ways that their roles could be evaluated, as described in the themes that follow.

No Formal Evaluation of Educators' Roles in RTI

In terms of staff evaluation, all 12 educators indicated that their roles in the implementation of RTI were not formally evaluated, whether by school administration or the district. All six of the GETs stated that they did not know how their roles in the implementation of the program were formally evaluated. Thus, it would appear that program implementation was not affected by any formal evaluation. For example, one GET explained, "I don't think there's anybody who comes in and evaluates me, it's just kind of more organic . . . I don't feel like there's someone that's coming in and evaluating the process."

Similarly, the SET/interventionist said that she had no idea about how her role in the implementation of the program was formally evaluated as she shared, **"**I don't really know how if it even was really evaluated." The CC/LC also did not know how her role was formally evaluated. She surmised that it might be an informal evaluation. As she said, "I don't really know that I was ever evaluated on it formerly, maybe more informally." The SLP echoed this sentiment regarding formal evaluation; she added, "Well I guess that's kind of a hard question. I don't know that, as far as somebody evaluating me within the process, I'm not sure that's happened."

Additionally, the principal stated that he did not offer any formal evaluation to evaluate the roles of educators who were involved in the implementation of RTI at his school. He indicated that they were just implementing the program as needed, and he did not remember having any discussion about monitoring educators with respect to their roles in the implementation of the program.

> I don't think I offered any formal evaluation; we just kind of did it as we went along. I don't recall any discussion about how to monitor teachers implementing. We just knew what our vision and goals, basically we modeled in implementing RTI with our staff, we model our RTI process by doing that.

Educators desired to have their roles formally evaluated. Three GETs and the SET/interventionist indicated that it would be helpful to be formally evaluated with respect to their roles in the RTI program. They added that having such an evaluation would assist them in knowing whether or not they were implementing the program appropriately. To illustrate, one of the GETs explained,

> I do not mind if they come in my classroom and they observe what I'm doing. They can look at the things I've done online. I don't see it as an invasion of my space and time, but more as a coming along side me to help me work with the kids.

Similarly, another GET shared,

> It would be nice to have feedback so that I know if I was doing what's right or wrong, whether it would be from that coach that I said we should have come in and help us . . . [Or] the expert of RTI [At the district], then they could come in and talk to us about it, here's what you're doing right, here is what you doing wrong. I would like that, like this is what's working, this is what's not and here's some suggestions to make the process improve. It would be nice to have that.

Although all the educators stated that their role in RTI was not formally evaluated either by the schools' administration or school district, and four educators indicated their desire to have a formal evaluation, most of the educators had a specific idea of what factors would be considered in such an evaluation.

Educators' roles evaluated by student progress. Four of the GETs, the CC/LC, SLP, and principal (*n*=7) assumed that their roles in implementing the RTI program were evaluated by student performance including whether or not students met the goals on their PEPs, based on their performance on tests that they are required to give as part of the implementation of RTI (e.g., DIBELS, and TRC). One GET said, "We do review if a student is going to be retained, we have to bring that sort of data with us and look at what we've done and what we've tried to help them meet their goals." Another GET added,

> Based on how if the kid is moving, if the child is moving forward and if they're meeting their goals and we know we're doing it right, but if they're not moving forward then we go back to the data and see maybe we put them in oral comprehension, but that isn't where they needed to be, they needed a phonological awareness then to go down to whatever it would be . . . based on the data that we had through the TRC and DIBELS.

Similarly, the CC/LC indicated that their role could be evaluated by the students' results and whether students successfully meet their goals. As she stated, "I would say our evaluation might be how many students are successfully able with interventions to reach that catch-up growth or on their way to doing it."

Educators' roles evaluated by conducting the process of RTI. All GETs, SET/interventionist, CC/LC, counselor, and principal (*n*=10) shared that their roles in RTI could be evaluated by how well they carry out the RTI process. All six GETs said that they were required to follow specific steps as part of the implementation, as well as work collaboratively at the weekly PLT meeting as they reviewed their students' PEPs and performance. One GET explained, "We kind of in a group setting at our professional

learning team meetings collectively look at groups of children that are having certain problems and collectively decide on interventions that we might do."

Similarly, the SET/interventionist mentioned that educators' roles in the implementation of the RTI program could also be evaluated by related paperwork such as the PEPs.

> I guess it would be evaluated on our paperwork. Ultimately, when we move a child from Tier 1 to Tier 2, our paperwork goes through someone. I don't know who's that is, but I guess that would be how it would be evaluated. If our paperwork is correct, but otherwise I don't really know who evaluates it, that's a good question.

Educators' perception that they were being informally evaluated was confirmed by the principal, who expressed that he informally evaluated the roles of school staff by how appropriately they conducted the RTI program process. He added that his RTI leadership team had their vision about where they wanted to be with the RTI implementation and they self-assessed and provided extra support for fellow educators as needed on an ongoing basis.

> We had our vision of where we wanted to be, we kind of self-assessed and saw where our staff was, and then supported them in different ways to make sure that they were doing what we wanted to, so some teachers are Tier 1 and they'll stay Tier 1. Some teachers need a little extra support and we help them in a different way and we have some teachers that we have to really push hard, so I think without saying it I think we've modeled RTI process with the staff as well.

Educators' roles evaluated by RTI team meeting. Four GETs, the SET/interventionist, CC/LC, psychologist, and counselor (*n*=8) stated that their roles in RTI could be evaluated during the RTI team meeting. In this meeting, students who did

not respond to the intervention provided in the general education classroom as part of their PEPs (e.g., Tier 2 intensive), were referred to the RTI team (i.e., IST committee). Therefore, GETs tended to try several interventions before they ultimately referred the student to the RTI team, where every component of the students' file was evaluated by the multidisciplinary team. As one GET explained,

> There's time that I have in my classroom during this IE time [Tier 2 intensive] to progress monitor and create the graphs that show if the child is growing or if they're not growing, so if they're not growing then you might have to decide that they need to be evaluated . . . or moved into the IST process, but we don't go there until after we have spent a lot of time doing interventions and getting that data.

Another GET stated that all of her interventions for a specific child were documented in the PEPs for each student and reviewed and evaluated during the RTI team meeting.

> The students who I have referred to IST . . . the IST team evaluates all of your work at Tier 2, evaluate and scrutinize and from there they have to make even more specific goals. I think whatever you do at Tier 2 is evaluated from them and they give you further instructional support and guidance us to where to go.

The counselor, who is the chair of RTI team meeting (i.e., IST committee), clarified that when any students were referred to them, they had a variety of members with different expertise (i.e., multidisciplinary team) who could evaluate what had been done by the GET with each student and whether or not the interventions were implemented effectively. She said,

> One of our members, that's all she does is interventions all day long, and then the school psychologist has the expertise of the area of deficit, so we're all throwing in our ideas and trying to come up with a plan that is reasonable, easy to

> implement, and measurable . . . What setting is it going to be done? How often are we going to do the intervention? How long is it going to take? Because most of the implementation of the interventions happens with the classroom teacher and she's got 20 other kids to take care of.

Four GETs reported that they avoided referring students to the RTI team meeting unless they were not responding to the most intensive intervention in Tier 2 intensive. Thus, any student not making adequate progress after receiving Tier 2 intensive must be referred to the RTI team meeting. In addition, everything that had been done with the student by the GET must be documented on his/her PEP and thus would be reviewed (e.g., evaluated) by the multidisciplinary team. This review then could become one mechanism for evaluating GET roles in the classroom, but does not address how other educators' roles are evaluated or even how GETs are evaluated beyond student outcomes in the intervention.

Educators' roles evaluated by a member of the leadership team. Three GETs, SLP, counselor, and principal mentioned that their roles might be informally evaluated by a member of the schools' leadership team (i.e., principal, SET/interventionist, CC/LC, and counselor). For example, one GET said,

> I'm not sure who looks at PEPs online, now we do have regular evaluations like for our teacher evaluations, but they don't necessarily come in and evaluate what we're doing [RTI] . . . I mean they may be there for our interventions; they may not be there. So I just think it's situational, we don't have a set this is what you're supposed to do here's your rubric for what we looking for and our expectations of you, and now we're going to come back and see if that's what you're doing.

Also, the SLP shared that, as a member of the RTI team meeting, she worked under the guidance of the counselor who is the chair of the RTI team (i.e., IST committee). She

added that as part of her participation in the committee, the counselor might informally evaluate her role in RTI by providing her with verbal feedback regarding her role.

> I know that our guidance counselor who sort of directs the process of the intervention phase, when it's talking about a specific child that's being considered, she is in there, she tells us when we need to come to the meetings and she gives us feedback about what kind of information we need to give to the teachers . . . But I guess I get feedback in terms of my participation in the meetings and helping come up with the interventions they give us verbal feedback.

The principal revealed that he used classroom walkthrough to observe the educators while they were implementing the program. Specifically, he conducted these observations during the IE time (i.e., Tier 2 intensive) to make sure that it was appropriately implemented by GETs and teachers' assistants, as well as to take action whenever necessary, as he stated,

> Probably the biggest piece that is our classroom walk through time . . . to go in there in an intervention and enrichment time to see if things were running like they needed to be. And making sure I evaluated it and evaluated the teachers for being out there and being part of the conversation being part of the implementation of what we were doing, so that I could see what I thought was a good idea on paper was it really being implemented the same way, so seeing that and then being able to see it instantly and trying to take action if I saw some issues come up was helpful in the implementation process.

Half of the educators described potential mechanisms for being informally evaluated by a member of the leadership team. However, as mentioned earlier, educators' desire for formal evaluation underscores an overall lack of formal evaluation available for the RTI program, an issue raised in the following theme.

Program Evaluation

Much like staff evaluation, all educators in the study commented on a lack of overall RTI program evaluation. Despite this, a number of educators felt there were a number of indicators that could be used to evaluate their program. Results related to these topics are presented in the next section.

No Formal Evaluation of Overall RTI Program

All of the educators stated that there was no formal evaluation of the overall RTI program, whether by the district or state. To illustrate, all of the GETs stated that they did not know how the overall RTI program was formally evaluated. Thus, their implementation of the program was not affected by any formal evaluation of it, as mentioned by one GET,

> I have no idea. I have no idea how it was evaluated . . . I don't think we have accountability for it, I think we do because we are required to do certain fill out certain paperwork and certain forms, and I know that the state can see those but it's not like they come back and say hey you didn't do this or you didn't do this. I don't think anybody says anything . . . So I don't think we have specific RTI feedback.

The SET/interventionist similarly shared that she did not know how their overall RTI program was formally evaluated, though they have never received any negative feedback regarding their overall program by the school district or state. She stated that she assumed their overall program was implemented appropriately as she said, "I don't know for sure how it was evaluated. We never got any negative feedback that we were doing anything wrong so I just sort of assumed we're good."

Likewise, the CC/LC added that she was not aware of any formal evaluation of their overall RTI program as she explained, “I don’t really know how it’s been evaluated at the district level . . . I don’t know, not that I’ve really aware of.” Whereas, the principal clearly indicated that there was no formal evaluation to the overall RTI program at his school, whether by school district or state as he explained, “No, no, I mean there’s been no official evaluation of our program.”

Educators desired to have a formal evaluation of the program. One GET, the SET/interventionist, and the CC/LC (*n*=3) shared that they would find a formal evaluation of the overall RTI program helpful. They added that having such evaluation would help them to be sure that their program was implemented appropriately. In the words of the GET,

> I guess it would be nice to know if you’re doing the right thing or not . . . I just do the best that I can and hope that I’m doing right with the training that I’ve had, so I don’t really evaluated on it, and I don’t know if it’s correct or incorrect, I just do what I know how to do and just hope that I’m doing what I’m supposed to be doing based on the training that I’ve had. I am the kind of person that does like to please other people and do the right thing so it would be nice to know exactly what is expected of me to make sure that I’m doing the right things but I can’t say that that’s in place.

These three educators desire evaluation of the program in order to guide decisions and reported that this feedback would allow them to know if the intervention was working as intended.

RTI evaluated by fewer referrals of students to SES. The SET/interventionist, CC/LC, SLP, counselor, and principal (*n*=5) stated that the overall RTI program might be informally evaluated either by the district or state by the fact that number of students who

were referred to SES had decreased after the implementation of RTI. For example, the SET/interventionist shared that when she started working at this school as a SET 13 years ago, she noticed that several GETs referred a large number of students to SES simply because they were performing below grade level. However, the implementation of RTI helped to decrease the number of students who were referred to SES, a change that she attributed to the sharing of responsibilities for all students between GETs and SETs. To illustrate, she said,

> When I started as an EC teacher, I just remember a lot of people, some classroom teacher who just if a student wasn't performing on grade level they just wanted them out of the room. So I think with RTI there's been a shift of putting a little more responsibility back on the classroom teacher to implement some of these interventions in the classroom and help these students that is not just all special education teachers' problem. So I think it's sort of helped us to share the responsibility as a staff of all the children, whether they're on grade level, above grade level, or below grade level, so I think it's been something to bring all teachers together.

The SET/interventionist added that the implementation of the RTI program helped them to reduce the number of students referred to SES (e.g., LD) by providing them with extra interventions to meet their needs during the Tier 2 intensive. In this way, RTI helped the school resolve the issue of over-identification of students as having disabilities. As she clarified,

> As a result of RTI that we have this very designated time [IE] to meet these students' needs before they have to move on to a higher Tier and maybe we were able to address a lot of them who were performing below grade level and bring them up to grade level without having to qualify them for special education, which in the past would've just been an instant thing if they were below grade level they're going to special education. And now I feel like we've added sort of

> this extra step in there where we can help to meet their needs and hopefully reduce the number that are qualifying for special education.

In a related comment, the CC/LC stated that the decrease in the number of students referred to SES after implementing RTI could be an indicator of the effectiveness of the overall program as she shared,

> I think at first teachers didn't know, they just said students are struggling in my class I need to refer them, they need to be tested for special education. That was kind of the default, and we've gotten so far away from that now we feel the process is so much more effective because we are really looking at the student and do they really need to be referred for special education or is there an intervention that we can give them to help them catch up because not everyone is a good candidate for a special education . . . So I don't know that we've ever really evaluated it formally but the fact that special education referrals are down, there not as many as we used to have. I think that's a good indicator that we're using the process in the right way.

Similarly, the counselor concurred regarding the decrease in students identified as having disabilities and how that was an indicator of program effectiveness. She said,

> I know that in the past years there's been a heavy amount of referrals for EC . . . our school district really looked at what we're doing to help these children, and also heavy suspensions, but overall, I think that we're where we're supposed to be. I mean the kids at risk are such a small percentage. I mean 80% of the student population is where they should be. It's that top 15-20% that needs more specialized help. So I feel like we're not over identifying student . . . So I've probably seen more speech evaluation this year, with learning disability and reading less referrals because the interventions are being done right away, there's the progress monitoring by DIBELS and TRC, it's not a guessing situation, we know exactly where that child is . . . It's a great monitoring device.

The principal mirrored the counselor's statement and added,

> The number of kids that get referred for educational testing has definitely decreased . . . I would say that we have a good rate of those qualifying for special education and they're not coming back to us saying no they don't qualify. So through the RTI process we do better at getting that top Tier of kids through the next step faster because we've had these interventions and stuff in place.

Overall, five educators viewed the decrease in the number of students referred to SES after the implementation of RTI as an indicator of the effectiveness of their overall program.

RTI at this school has become a model for the district. Two GETs and principal shared that, although the overall RTI program at their school was not formally evaluated either by the district or state, it might be informally evaluated by the fact that it became a model for the rest of the schools in the district. To illustrate, as mentioned earlier, the school where this study was conducted was one of three schools that started implementing the RTI program as part of the federal grant that it received a few years ago. Thus, the study was conducted in the third year that the school had been implementing the program.

However, the implementation of RTI was expanded district-wide in the previous year (i.e., 2014-15), so all schools in that district were mandated by the district to implement the RTI program. Therefore, three educators at this school indicated that their school was recognized as the school that had been developing great PEPs and had a good reputation. It is worth mentioning that all the documents regarding the implementation of RTI (e.g., PEPs) were accessible by the school district, as one of the GETs said,

> The district has really spoke highly of our school and our implementation, I mean we do have very dedicated staff here . . . We have good principal that's keeps everybody together and going in the right direction. So the district is aware of our participation in RTI, I don't know about the effectiveness part of it and also I'm sure that the state is aware of it too . . . Just a month ago the state board of education came and visited our school and that was one of the things he said, we've heard you've been doing really good things on both, working with children of poverty and we do a lot of our staff development on that and on different strategies and approaches to children with poverty and also the RTI bit of it. So they were very interested in that and they're aware of it . . . We're proud because they chose our school. I think ours was maybe one of three schools that they came to in this district. They were very complimentary of what we were doing and I think you feel good about that.

Another GET added,

> Our school has been recognized in the past for developing great PEP's because we put those on our shared drive for our school, so it is accessible for everyone to see. So our school in the past has had a very good reputation as far as teachers creating very well thought out PEP's and interventions and we've had many schools come to us for questions for teachers and teacher leaders for support through the process . . . For example, I've had a couple teachers from other schools come to me for help for PEP's because [Our school] PEP's last year were mandatory, they became mandatory for the new system the new RTI system last year it became mandatory for the whole county but [Our school] had already adopted RTI and this whole system few years ago so we were kind of a year ahead of the other schools.

Similarly, the principal revealed that he was invited by the school district to lead a district RTI implementation team in order to implement the program in the rest of the district. He indicated that both the state and the school district were moving to expand the implementation of RTI for all elementary schools, and his leadership team at the district level was responsible for this shift. Therefore, in addition to the positive feedback that he received from the school district, he stated that this could be indicative of the program's quality at his school, even if there was no formal evaluation to it. He clarified,

> Based on being asked to lead a district team in implementing it at other schools, that tells me we're doing something right if they wanted to be implemented in other schools . . . We've shown it off what we're doing to many district level folks, I was asked to sit on the implementation team for the district for RTI and how we can roll it out to all the elementary schools in the county. And that was based on my discussion with district leadership about how we implement it and them coming out and seeing how we implement it, and I think that's been some good feedback for us and made the staff feel good that kind of what we're doing here is going to be modeled and used to help present the RTI process to the rest of the county that have not had exposure to it before. Because the State is moving in that direction and we want to get ahead of the curve as a district because we're so big in getting that implement to everybody. So I've been part of that district level leadership of getting that started. It's in our school improvement plan and we always get positive feedback from it with our review

Participants reported that they felt that the program was considered to be successful by the school leadership as well as the district and the state due to the school being used as a model for other implementations of RTI. Results related to other components of the Implementation Science considered helpful by educators are presented in the themes discussed in subsequent sections.

Facilitated Administrative Supports

Facilitated administrative supports were referred to often by the educators. Results related to the nature of these supports are presented in the following theme.

Administration was Supportive

All 12 educators felt that the principal and leadership team at their school provided them with the support needed to implement RTI. As one of the GETs explained,

> We had several opportunities to work with administration in developing the PEP's, the personalized education plan which I see is a part of the RTI and they met with us in groups. They are willing to meet with us individually and that was quite helpful because I got it done.

The SET/interventionist, who was also part of the leadership team, said that they conducted several learning sessions with the school staff, not only about RTI, but also about how to work with children in poverty in general. She added that these kinds of learning sessions helped educators in the implementation of RTI, particularly in increasing their ability to differentiate between students who truly have LD and students who have had difficult life circumstances. As she clarified,

> We've done a lot with learning about working with children in poverty, and I think we gained some strategies, almost how to differentiate students who may just have difficult circumstances, and students who genuinely have a learning disability or have some sort of academic struggle, so I think that helped as well.

The SLP mentioned that the principal supported all of the staff by providing them with several continuing education opportunities regarding the appropriate implementation of RTI. She had worked in other district schools implementing RTI and thought that the RTI program at this school was more successful because of the administration's support.

> I think that our principal does provide a lot of continuing education opportunities for us to discuss the different interventions that we might use for kids . . . I think we are probably more successful because I think we do get a lot of support, and we do have high quality teachers that really try to implement interventions.

The counselor mirrored this sentiment, even nominating the principal to be the teacher of the year.

> I nominated him [principal] for teacher of the year, me and another staff member, and in that nomination. I said that have you ever had a supervisor that made you want to go beyond what you thought you could do and that's what I said about [principal]. He doesn't micro-manage, he is very observant in how you are with

> children, with teachers. He asked me for help sometimes on sticky situations and that makes me feel very valued, and I want to work hard for him.

The principal mentioned that the people who were taking leadership roles within the school were also quite supportive to other school staff when needed in order to implement the program appropriately. He explained,

> I found the right people to take the leadership roles in this, provided the right professional development, so eventually we're right where I was hoping we would be at this point in the process, and it's grown the way I've wanted it to grow without me having to dictate it, so that was good that it was growing and it shows me that the teachers believe in the process too, which is a good feeling.

All of the teachers agreed that the administration at their school, whether principal or the RTI leadership team, was very supportive in their efforts to implement RTI. The educators felt that several types of support were particularly helpful.

Provided highly qualified staff who helped to provide OST. All 12 educators stated that the administration as well as the leadership team provided them with highly qualified staff members within the school (e.g., teacher leaders/interventionists and CC/LC). These highly qualified staff were available to provide OST whenever necessary. As one GET said,

> We have someone who comes for an hour, 9-10, and she's a certified teacher so she's a support person for some of our children who are not meeting their goals . . . I can pick kids from my classroom to go to her working with her for 20 minutes every day . . . They provided this highly qualified staff member to work with my students for 20 minutes a day on the targeted skill.

An example of OST support was provided by the SET/interventionist, who recounted that the school district changed the way that GETs document the PEPs for struggling students in the year before the study was conducted (i.e., 2014-15). She and another teacher learned about how to use this new technology and provided OST to the rest of school staff about how to use this new system as part of the RTI program. She described,

> We've done the trainings for programs, we've done a lot of computer trainings as far as the programs that we use to document monitor our RTI process. We just rolled out a new program this year where I and another teacher went to learn this new program and we came back and trained our colleagues on a new web-based program that we're using for PEP's to document any Tier changes. So that's been the big push over the last year is that training.

The SLP supported the idea that school administration was responsible for putting in place highly qualified staff capable of providing OST, whether in the PLT weekly meeting led by the CC/LC or the teacher leaders/interventionists who could provide educators with OST whenever necessary. She stated,

> There's a good amount of support about interventions and trying to implement those interventions . . . They meet weekly with the teachers in PLT meetings, and then they discuss different children that are maybe struggling. They give them training on how to write PEPs or how to write intervention plans on children. So that would be on a weekly level. I think our different teacher leaders meet with the classroom teachers on helping them learn the programs and determining what children need, so I think that would be kind of the ongoing support . . . There are weekly meetings between the teachers and the curriculum coordinators to try and talk to them about their learning plan.

The psychologist felt that the technical support provided helps educators feel more confident to use different strategies with their students. She explained,

> When teachers feel supported, they're going to be more willing to put in the time and the effort and then go the extra mile with some of the students because they realize this is appreciated and I do feel that appreciation from the principal . . . So I think they feel supported and confident that if they try working in new and different ways with the children that they will receive support.

The principal indicated that the RTI program was structured to encourage the sharing of responsibilities by having the leadership team as well as PLT and RTI meet weekly to determine how implementation of the program was going. These meetings helped to determine whether or not there were any needed actions to resolve issues that educators faced. According to the principal,

> When we sit down as a leadership team and talk about what we're seeing, and if we're seeing areas of what we appear to be weaknesses, we're going to find some professional development usually through people in our building that are doing a good job of it. Our staff meetings are structure that way, we have two or three sessions going on during staff meeting where teachers can either be assigned or can choose to go to learn about what we're doing and what folks are doing and doing a job of in the building . . . But those teacher leaders have helped tremendously and then my curriculum coordinator's and their PLT meetings have helped tremendously in getting that message out there of what we can do.

Provided classified trained teacher assistants to help GETs. Five of the GETs, the SET/interventionist, CC/LC, and principal stated that the school administration provided classified and trained teacher assistants who helped the GETs with classroom instruction. The teachers felt that this support was especially helpful during guided reading (i.e., Tier 1+2) and IE time (i.e., Tier 2 intensive), when the GETs provided small group or one-on-one instruction. In the words of one of the GETs,

> I think it's just actual support staff; second grade has a lot of support staff that's helping provide interventions. That's the biggest support; actual people . . . there

> is a teacher's assistant who come in and they are doing interventions . . . To have more people in the classroom definitely more helpful, because I have a class of 18, 19 children and I'm trying to pinpoint what they need, their needs are so different, that more people available to do more small group instruction, more re-teaching is really helpful.

The SET/interventionist mentioned that in addition to providing the GETs with teacher assistants, administrators also provided several training sessions for GETs and the teacher assistants on how to provide the needed support for students in Tier 1+2 or Tier 2 intensive (e.g., corrective reading, reading mastery). According to the SET/interventionist,

> I think with our IE time [Tier 2 intensive], we receive so much support, even down to our teacher assistants have been trained in programs like corrective reading and reading mastery and it's very sort of scripted direct instruction approaches to work with students who have reading disabilities before they qualify for special education. I feel like we really try to be proactive and address students' needs before they necessarily need to go into Tier 3 intervention [SES]. So we've done a ton of professional development in that respect.

The principal said that the school administration provided all educators at his school with any type of support that would help them implement the RTI program. He added that he had 25 classified teacher assistants who helped the GETs implement the program as needed. These teachers' assistants also received various types of training and support by the school administration and the leadership team in order to be sure that everybody was capable of conducting the program as needed. As the principal said,

> They all get support, so everybody has a different role but everybody's part of the process . . . It's an expectation of being a teacher and teacher assistant here is that everybody does that . . . We have like 65 certified staff members, and 25 classified teacher assistants, so I have about 100 staff members . . . And now it's

> my job to make sure everybody's capable of doing that through staff development through trainings but everybody's expected to be part of it.

Administration fully aware of pressure on educators and willing to help. All the educators interviewed stated that the administration (i.e., principal), as well as the leadership team at their school were fully aware of the pressures on the educators and that they were willing to help by making themselves accessible to answer any questions at any time. One of the GETs explained,

> It's nice, it feels like a little bit of a relief to share the load of work because the children at a school like this one come to us having lots to learn. So we work together toward the success of the child.

According to another GET,

> I know [principal] has told us if you have any questions please come to me, so making himself accessible and available for support if needed . . . So a lot of people were getting very stressed out with just the whole mechanics of writing up a PEP on the computer, it was different than the way we had done it in the past, so a lot of people were feeling stressed out and our administration just said they extended the deadline for writing PEP's it was supposed to be two weeks ago and so they extended it to this Friday and in the meantime they said if you have any questions you can go to this person, this person, this person. I think extending the deadline showed that don't stress out it's okay and then providing us with additional professional development if you so needed.

Similarly, the psychologist who was working in other schools who have implemented the same program within the same district stated that the administration created a positive learning environment.

> I do know the principal certainly is supportive of individual teachers and likes to hear about successes that have going on through RTI or any other aspect. I think it

> filters down to the students. I think the students feel like he's supportive as well . . . I think it's a positive feeling when that occurs and you can tell often times when you first come into a school what type of school environment exists there. This particular school has a very positive environment.

The counselor stated that the principal supported everybody in the school and that he was a born leader who motivated his staff to do their best. Because of his extensive knowledge of RTI, he conducted PD not only for his school staff, but also for all the educators in the school district about various topics related to RTI.

> I've never enjoyed working for anyone as much as I have with [principal]. He makes it fun, we work hard but we also play hard . . . I feel like my performance is a reflection of his guidance and supervision. He's a born leader; I think a born leader motivates you to do your best at your job and to take great pride in what you do . . . He has educated the whole staff on our [School district] [PEPs] goals this year and we're trying to close the achievement gap . . . I know he's there if I need to ask him a question about what should I do about this case, he expects you to do your job and I send him a copy of the agenda so he knows what students we're addressing. Occasionally, he will come to the meeting if we need his help . . . A principal can make or break I feel like how you feel about your job, the leadership that's provided, and plus he makes me want to come to work every day.

One way in which the principal recognized the pressure teachers were under involved building an hour-long Tier 2 intensive time block into the master schedule and giving teachers permission to use that daily hour-long time to work with their students who needed extra support,

> We believe in this process and we do it all the time. We're always professionally developing, our early release days, we spent half days planning our intervention groups and talking about good interventions, and we've done that . . . The first thing was putting that hour-long Intervention and Enrichment block into our master schedule [Tier 2 intensive]. And giving them permission to take that time to work with students on where they're . . . We've got to bridge those gaps. I

> think, starting it kind of grass roots with the teacher leaders and building it up not just me dictating that this is what we're going to do, but planting seed and letting grow up internally through the building has probably been my biggest way that I've supported this.

School staff were aware that the principal made himself as accessible and as helpful as possible in order to implement RTI effectively, with the ultimate aim of closing the achievement gap. The school district also provided supports, the topic of the next section.

System Intervention

System intervention refers to the methods and amount of support that the district provided for the implementation of the RTI program. Results related to district supports are presented in the theme described here.

District Provided PD and Technology

As already reported in the consultation/coaching section, the district helped by providing school staff with the initial PD in the first year of RTI implementation. Four GETs, the CC/LC, counselor, and principal said that the support they received from the school district prior to the implementation included online technology that allowed them to document and track the performance of each student after implementing the intervention with him/her. One GET explained that this was very helpful in implementing the program,

> The school district provided the initial training [PD] and they also provided DIBELS and TRC that we use as a diagnostic to even determine where and what interventions that the kids are getting . . . They provide online resources that we use to do our PEP's, they provide the diagnostic tools that we use to determine

> where the kids are, and they provide plenty of online resources for the kids, so pretty much they provide everything that we need to implement it.

The district's role in providing helpful technology was supported by the principal who stated that the district provided the school with technology, software, and materials to implement the RTI program.

> They [District] provide reading foundations training . . . Tremendous support, as part of the [federal grant] . . . Worked with us and our teacher leaders to help develop our RTI plan, so we've had that support. We've had support in training on writing the PEP's and using the new software that we're using to do that.

Initial PD and technology provided by district was not enough. Although the school distract provided all educators with the initial PD as well as the technology needed to start the implementation of RTI, two of the GETs, SET/interventionist, and SLP shared that the initial PD and technology provided by the district was not enough. According to one of the GETs,

> Usually what she was saying [RTI expert from the district] 'this is Tier 1, this is Tier 2, this is Tier 3, you need to do this, you need to do this, you need to do this, here's your handout, here's a copy of the PowerPoint that I just gave, like I just read you the PowerPoint, here's a copy of that,' and you're expected to do it.

Similarly, the SET/interventionist shared that the initial PD that the school district provided was not enough at that time to implement RTI as needed. She added that they had not received enough initial training. She said,

> I don't feel like it was major, I don't feel like we receive tons and tons of professional development. I sort of feel like it was one of two times that she [RTI expert from the district] Came and taught us at the school as a school and then it

> was just what we're doing now. So I don't feel like we had a ton of professional development going into it . . . I think that it would be helpful to see maybe how it was working in other places . . . Because I guess it's hard when you're initially implement it, I mean you can't tell everything, it would take forever.

District provided OST as technical assistance. The district did provide other technical assistance. All four RTI leadership team members indicated that they had received extra technical assistance support from the district RTI expert and stated that the OST and technical assistance was helpful. The purpose of the OST they received was to support their roles as project leaders. The district was planning to expand the implementation of the RTI program to the rest of the schools in the district. Thus, the school would be receiving less technical assistance from the district when that occurred. As a result, the district worked intensively with members of the school leadership during the first and second year, providing them with several training sessions designed to make sure that they could handle the RTI program when district support was phased out. The SET/ interventionist stated,

> In my teacher leader role, I was able to go to some more detailed professional development with [RTI expert from the district] to where I learned more about the different Tiers and what happened at each Tier, so when I was able to get more kind of specialized training I felt much more comfortable with it and it made so much sense to me.

However, by the third year, district support began to dissipate and that was a concern to staff. For example, according to the CC/LC,

> [RTI expert from the district] is our district RTI implementation person and she has done a lot of training with us in the RTI model, so she has been a great resource. She's kind of someone we can go to as needed because she feels like

> [our school] is kind of ahead of the curve for the district [Thus] we're not receiving lots of ongoing support right now.

At the same time, the federal grant they had received officially ended last year. Though there was some carryover money assigned to provide relevant OST for RTI implementation, as the principal said,

> They're [District] the ones who help funded our reading foundations training. They provided money for professional development if there was book studies we wanted to do or places I wanted to send teachers or bring people in, they helped fund that . . . Our [Federal grant] officially ended last year but there's some carryover money and this year the whole focus is on RTI.

District should continue to provide OST. Although the district RTI expert worked intensively with all members of the school's RTI leadership team in the first and second year, seven educators indicated that school district should continue providing OST to help them implement the RTI program appropriately. As one of the GETs explained,

> It would be nice to have someone to help us with that process . . . I feel like it would be beneficial to have someone along the way even if it a few times a year to come to us, and it would have to be more one on one or even like a grade level meeting. You bring your kids to that meeting you say these are the ones that I've worked with, here's my Tier 2 students here's what worked, here's what didn't. What's the next step? I think that would be beneficial.

The SET/Interventionist felt similarly. She said,

> I would feel a little bit better if I knew that there was something in place to make sure that everybody was doing the right thing, maybe that would feel a little better . . . Maybe if there was a person that sort of makes sure that all schools are following the process correctly and implementing it the way they should be just

> kind of somebody to hold those people accountable . . . I guess that would be reassuring.

Educators in the study viewed PD and OST as integral components of proper implementation of RTI. It is important to consider educators' feelings towards the entire RTI model, the topic of the theme in the following section.

Educators' Feelings toward RTI

The feelings of educators toward the implementation of RTI for three years varied due to numerous factors. These feelings and the factors responsible for them are described in this section.

RTI was Challenging to Implement but Became Easier over Time

One of the GETs, SET/interventionist, CC/LC, counselor, and principal felt that the implementation of RTI was not easy at the beginning phases, but that it became easier after over time. According to the GET,

> You can get excited about wanting to help students on a broad or on an individual basis, but at the same time this is coming on with many other responsibilities and burdens that are put on teachers . . . But I would say that in the years that I've been in RTI, several times I have found it to be very beneficial for the student. It helped me to focus on an intervention and not worry about where they really need to be but it's kind of, I need to take care of this deficit first, if nothing else RTI does that for a teacher. It helps them, there's a lot of static in your head and you just kind of wipe that static out and say this is where I'm focusing . . . It does focus on this intervention first, you keep track of that intervention, and then you move forward after that. Wait till you get to that goal and then move to the next one. So several times I've seen that to be a good approach.

Similarly, the CC/LC shared that she struggled at the beginning when she first implemented RTI. However, she stated that it got easier over the years and she felt that they were now in a better place, as RTI helped educators to better focus on interventions.

> I think we struggled but we're getting to a better place with it now, but the struggle has been we know we need to be providing interventions . . . We are getting better at assessing our children to know where we need to apply those interventions what, where the gaps are . . . That helps to write interventions for students, make sure to implement the interventions are being implemented and helping to determine the success of those interventions and then determining next steps for students.

The counselor stated that at the beginning she sometimes felt frustrated because she could not offer the educators enough information regarding the interventions that they could use with their students. However, over the years she had acquired knowledge from her participation in the RTI team meeting. As she described,

> I feel over the years that I've accumulated knowledge just by being a member of the committee. Sometimes I have felt frustrated that I didn't have more to offer in terms of the actual interventions to be used, and research-based strategies to use. But I feel very happy that I'm able to take care of the process. I know what needs to be done, I feel very equipped to do it.

Although the principal shared that he had been interested in implementing parts of the RTI program at his previous school, he felt that his current school was a better test for RTI implementation because of its level of poverty as well as the high numbers of ELLs (i.e., 67% of the student body). In the end, he felt that RTI was a helpful approach for all of the students.

> I had previously been interested by the RTI process and had started the implementation of a few pieces of it at my previous school . . . But coming into a school like this that had a challenging population of students [ELLs] with the language barriers and the poverty issues that we have, I thought that this was a good situation to put RTI through the ringer and see if it made a difference . . . but again my teachers are always seemed to be right there wanting to raise the ceiling up, so I will not going to hold them back, and then that works to my advantage later because then I can have them talk about how it worked to other teachers and then it feels like teachers talking and not me dictating something that needs to be done.

RTI Helpful to Focus and Reach Targeted Students' Needs

Three GETs, the SET/interventionist, CC/LC, and principal felt the implementation of RTI helped them focus on each students' specific needs and target them for instruction. Further, three of the GETs stated that they became more focused in their instructional practices due to RTIs data-driven process. Also, RTI gave them teaching strategies to try before more serious ones such as special education. As one GET expressed,

> I felt good about it because we know how to reach every child . . . We had the Student Assistance Program (SAP) process before that. So this was supposed to be a more geared and catered process that would help us reach every child. The SAP process would help with specific child's that had huge issues, so this [RTI] would help us meet the child before they made it like Tier 3, so I was excited to be able to have some sort of intervention to be able to use with kids before they got to the point where they needed serious interventions.

The SET/interventionist felt that the implementation of RTI had totally changed the way their school approached not only students having disabilities (i.e., LD in reading), but also the struggling students who were not yet identified as having special needs. The structure of the RTI program caused educators to focus more specifically on

the instructional needs of struggling readers, stressing interventions for each of them based on their precise needs during the IE time (i.e., Tier 2 intensive). She described,

> I think as a whole it changed the way our school views, not just students who are already classified as EC, but students who are in need because I feel like when the whole RTI implementation came, there was just a big shift in our school in general. We started implemented our IE time which is like a designated hour every day to focus on intervention, so even students who are not already qualified as EC students were able to get interventions in their area of need. They're able to get one on one or small group interventions.

Likewise, the principal stated that he felt that the implementation of the program was very helpful because it was for all students, was a data-driven approach, and through it the staff could access data (i.e., DIBELS and TRC) and meet the individual needs of every student.

> All of our kids . . . are exposed to universal screeners, the DIBELS and TRC, in reading. So all my teachers have access to that data, and they all have intervention from other curriculum to just focus on where those kids are weakest and building those gaps.

RTI Not as Helpful for Kindergartners with Little Prior Knowledge of Reading

The two kindergarten teachers interviewed viewed RTI in a more negative light. They felt that RTI was more helpful for students who were older or had prior knowledge of reading. According to one GET,

> I've taught older kids [At this school] and I've really enjoyed that for many years of my life . . . [But] most of the times . . . at many schools and [This school] being one of them language is the deficit . . . It's not so much learning or a mental thing, especially in the younger kids . . . many of our students are going to be below grade level but it's more of a language thing [ELLs] . . . In kindergarten, they may not know their letter sounds. And that's where you really need by the middle of

> the year, they need to know their letter sounds, they need to be segmenting words and all this kind of stuff, and you're thinking middle of the year this is where I'm expected to have all of my kids in is here. But if they don't know the letters to begin with, letter identification, then you're just not going to get further down the road.

The other kindergarten GET went into greater detail and explained the challenges that she faced while implementing RTI as she described,

> We periodically have sign up for training which helps us in working with our second language students [ELLs] . . . I teach kindergarten, I could see . . . [RTI] being more helpful for someone who taught older children. My children are basically coming in with little to no prior knowledge regarding reading, so I'm starting with those basic building blocks. So unless they're already reading, you know, to go back and test them is not going to happen.

RTI Implementation Varied among Schools within the Same District

The SLP and school psychologist were working in other schools in the same district that were implementing the RTI program, though both were not directly involved in implementing the RTI intervention. However, they both felt that there was a lack of consistency among schools regarding the implementation, making their roles in the process unclear. As the psychologist explained,

> I am participating at the school level with various things, so to be involved is fine with me. I don't actually do the interventions per se. So I'm not in the hands-on part of it so much, but there are some psychologists who have done some of the interventions actually . . . It may vary from school to school in the way that schools handle RTI may be a little bit different and the way we participate may be a bit different.

As implementation varied between schools, staff members such as the SLP and psychologist who work at other schools reported that the differences in implementation

made them feel their roles were ambiguous. This lack of clarity demonstrates the need to look at whether the school is implementing RTI with fidelity and sustainability, described in the next section.

Research Question 2

To what extent is the school implementing RTI with fidelity and sustainability?

One of the main goals of the Implementation Science model (i.e., seven core components) is to implement EBPs (e.g., RTI) with a high level of fidelity and sustainability in order to reach its intended outcomes (Fixsen et al., 2013, 2005). It is important to note that well-trained educators must be responsible for the implementation of EBPs such as RTI while periodically monitoring their fidelity to promote the effectiveness of implementation and therefore resulting in improved student outcomes (Fixsen et al., 2013, 2005; Keller-Margulis, 2012). To answer the second research question, the researcher directly observed: (a) three of the GETs who were implementing the RTI program (i.e., one teacher from each grade level, K-2) three times (i.e., Tier 1, Tier 1+2, and Tier 2 intensive), and (b) two of the RTI program team meetings (i.e., IST committee meeting).

Also, the researcher was able to obtain student data on both DIBELS and TRC over the last three years (i.e., 2013-14, 2014-15, and 2015-16), which helped to compare the students' performance from the start of the RTI program in the 2013-14 school year until the middle of the 2015-16 school year (i.e., the year when the study was completed). Last, interview data (i.e., theme number nine) are presented to clarify issues related to program sustainability.

Classroom Observations

Classroom observations were used to measure the fidelity of RTI implementation by observing each randomly selected GET of grades K-2 at three different times. This resulted in a total of nine classroom observations that were conducted. In order to increase the trustworthiness of the classroom observation data, and the inter-rater reliability (IRR) was calculated for each observation, as well as the overall percentage of IRR. Data related to classroom observations are described below.

Fidelity of Tiered Teaching

As described in Chapter III, the researcher used the classroom observation protocol designed by Vaughn and Briggs (2003) to determine the fidelity of reading instruction. The protocol was especially designed for classrooms within RTI schools having a high percentage of ELLs (Vaughn & Briggs, 2003). The researcher adapted the instrument by adding a comprehensive field notes component for the purpose of clarifying the context of the phenomenon and its potential relationship to treatment fidelity. IRR for the classroom observation form was conducted with a doctoral student in the ELC department who was familiar with the classroom observation protocol and had a Master's degree in teaching ELLs (Quimby, 2012; see Table 5).

As described in Chapter III, instruction was rated based on the comprehensive field notes taken by the researcher. To obtain IRR, the independent observer was given a copy of the researcher-taken field notes and asked to rate each item based on those comprehensive notes, just as the researcher had done. IRR was calculated based on the number of agreements divided by the total of the agreements plus the disagreements,

Table 5

Percentages of Fidelity of Implementation of RTI by Observing Three GETs

	Tier 1				Tier 1+2				Tier 2 Intensive			
	GETK	GET1	GET2	%	GETK	GET1	GET2	%	GETK	GET1	GET2	%
1. Instructional Practice (7 items)	4	5	5	67%	6	6	6	86%	6	6	6	86%
2. Interactive Teaching (4 items)	3	3	3	75%	3	3	3	75%	3	3	4	83%
3. Adaption for Individual Differences (2 items)	2	2	2	100%	2	2	2	100%	2	2	2	100%
4. General Instruction Environment (3 items)	2	2	2	67%	2	3	3	89%	2	3	3	89%
5. English Language Development (10 items)	7	6	7	67%	9	9	8	87%	10	9	8	90%
6. Content Specific to Reading/Language/Art (6 items)	4	4	4	67%	5	5	4	78%	6	5	5	89%
Total Raw Score	22	22	23		27	28	26		29	28	28	
Average Percentage by Tier			70%				84%				89%	
Overall Average Percentage							81%					

multiplied by 100 (Gast, 2010, p. 159; see Appendix D). Percent agreement was calculated for each Tier and overall. In all nine observations, the IRR ranged from 90 to 100%; the overall average IRR for all observations was 96%.

As shown in Table 5, Tier 1 was implemented with a lower percentage of fidelity (i.e., 70%) since some items were not checked as being observed. Fidelity in Tier 1+2 was higher (i.e., 84%). This may have been due to the fact that each of the GETs had one to two teacher assistants helping them conduct the small group instruction carried out in those Tiers (see Table 1 in Chapter III).

During Tier 1 and Tier 1+2, students identified as SES or classified as ELLs stayed in the general education classroom with their peers. However, during Tier 2 intensive, those students were pulled out of the classrooms to receive Tier 3 provided by the SET or SLP as small group and/or one-on-one services. Therefore, in addition to the extra assistants, the GETs had fewer students during the Tier 2 intensive time; students were also clustered across grade levels based on similar needs on the DIBELS and TRC, making the groups more homogeneous. These factors singly or together may have resulted in a higher percentage of fidelity (i.e., 89%). Still, the percentage of implementation fidelity overall was an acceptable 81%.

Team Meeting Observations

One of the main components of the RTI program at this school was the weekly RTI team meeting (i.e., IST committee), which was where all of the key RTI decisions were made. The team meeting was also important because it was the place where all staff who played a role in the RTI process came together, making the evaluation of individual

roles and group functioning at least potentially possible (Keller-Margulis, 2012; Shapiro et al., 2012). Indeed, GETs had to document what had been done with each child in Tier 1, Tier 1+2, and Tier 2 intensive; any student who was not responding adequately to the intervention in the general education classroom had to be referred to the RTI team meeting. During the RTI team meeting, each member would also have access to the referred student's online PEP in order to collaboratively review and evaluate the student's performance, as well as the effectiveness of the intervention based on the student's data. The team then made a decision to either set up further goals and interventions or refer the student to more testing by the psychologist.

Fidelity of Team Meeting

The researcher observed two RTI team meetings, and in each meeting, used the team meeting observation format adapted from Martin et al. (2006), along with a comprehensive field note taking strategy (Wolfinger, 2002). In order to increase the trustworthiness of the team meeting findings, all of the team meeting observation forms along with the comprehensive field notes taken were checked with the chair of the committee (i.e., participant checking). Also, the team meeting observation forms, as well as the comprehensive field notes were checked with a doctoral student in the department of SES who had experience working in American K-12 public school for eight years, and had four years of experience as a co-chair of RTI implementation committee at the school level (i.e., peer checking) (Creswell, 2013; Maxwell, 2013; Quimby, 2012; see Table 2 in Chapter III).

By observing two RTI team meetings, the researcher collected data regarding the collaborative decision-making efforts of teaching and non-teaching personnel who were part of the RTI implementation process, including those who did not have a hands-on role like the GETs and SETs (i.e., psychologists and counselors). Also, the researcher was able to gain insightful data regarding the other five critical components of RTI, namely (a) universal screening and progress-monitoring, (b) data-based decision making, (c) criteria to determine unresponsive, (d) multidisciplinary evaluation, and (e) special education, that could not be observed during the classroom observations (Fuchs & Fuchs, 2007; see Figure 1 in Chapter II). These notes are summarized in Table 6.

The RTI team meetings were conducted in the Guidance office and were attended by five educators: one GET who had referred a student for reading, one who had referred a student in math, the SET/interventionist, the psychologist, and the counselor who was the chair of the RTI committee. All the educators were white and only one member was male. The goal of the two meetings was to make a decision regarding one student in second grade who had both health and academic issues and was referred by two GETs; the student was performing well below grade level in reading, writing, and math. After reviewing the student's PEP and all the data collected regarding his performance (i.e., DIBELS, TRC, and Common Core standards), each of the committee members had the opportunity to contribute and share his/her data, as well as their thoughts regarding the student's performance. Both referring GETs were asked several questions by other members of the RTI team regarding what they did with the student in the classroom and why they thought the student was not making progress in the current intervention.

Table 6

RTI Team Meeting Observations

Critical Components of RTI	Examples from RTI Team Meeting Observation
1. Universal Screening & Progress-Monitoring	The two referral GETs brought the student's data for both universal screening and progress monitoring (i.e., Tier 1, Tier 1+2, and Tier 2 intensive) in both reading and math, which was already part of the student's online PEP as well as his folder in the Guidance office. In addition, all members either had access to the student's PEP or were provided with a copy of it.
2. Data-based Decision Making	The decision regarding the student was made based on data from universal screening and progress monitoring as measured by the DIBELS and TRC. After reviewing all of the student's data (e.g., PEP), the RTI team members all agreed to provide the student with a new set of interventions as part of Tier 2 intensive, provided one-on-one by a teacher assistant, and peer tutoring. The student's progress would be monitored every two weeks.
3. Criteria to Determine Unresponsive	The RTI team used the DIBELS and TRC benchmarks as well as the Common Core standards to determine that the criteria for acceptable performance would be going from level O to level Q (TRC-Comprehension) with 80% mastery for that student with the new set of Tier 2 intensive interventions.
4. Multidisciplinary Evaluation	The SET/interventionist, psychologist, and counselor collaboratively contributed to the evaluation of what had been done by asking the two GETs several questions regarding what interventions they used with the student based on the data collected about his performance. They then suggested setting up more intensive intervention as a part of Tier 2 intensive to be provided to the student using two strategies: one-on-one instruction delivered by a teacher assistant and strategic peer-tutoring with high performing peers.

Table 6

Cont.

Critical Components of RTI	Examples from RTI Team Meeting Observation
5. Special Education	Although this student was performing well below his grade level, the SET/interventionist and psychologist, as well as other team members decided to not refer him to SES (i.e., Tier 3) yet, since one of the GETs stated that he showed some improvement after using the peer-tutoring strategy. Thus, the student was set up for more an intensive intervention that would be implemented for 5-6 weeks, and his progress would be monitored biweekly before the team met again on February 7. If the student was still not responding adequately to the intervention, the team would then decide if the student qualified for more testing, and maybe a referral to SES.

Although the student was not responding adequately to the interventions provided by both GETs, even during Tier 2-intensive, one of the referring GETs stated that the student did seem to respond well when he was helped by one of his well-performing peers. Thus, the other team members felt it would be beneficial to implement such a strategy if it was shown to be effective. However, all the team members were concerned and spent 10-minutes discussing the issue of using such a strategy, and how to use it adequately to avoid negatively impacting the high performing student.

At the end of the second meeting, the decision was made collaboratively by all members of the RTI team to come up with another set of Tier 2 intensive interventions that specified: (1) realistic goals that could be reached, (2) by whom it would be

provided, (3) the setting where it could be provided, (4) how long the intervention would take, (5) how the intervention would be evaluated, and (6) the mastery level for each goal. The team then decided to meet to discuss the student's progress 5-6 weeks after it was implemented. At that time, they would decide whether or not he made adequate progress and could stay in Tier 2 intensive, or if he needed to be referred for more psychological testing and, if eligible, identified as having disabilities so he could receive SES (i.e., Tier 3) provided by SETs.

Student Data

While student outcomes were not the primary focus of this study, and thus not a direct focus of the research questions, the researcher felt that reporting on implementation quality without it would be neglecting an important avenue for interpreting the findings. Therefore, the performance of students on both the DIBELS and TRC in grades K-2 over the last three years are presented here. Note that the DIBELS was administered to all students in grades K-2, whereas, the TRC was administered to evaluate students whom the teachers thought were struggling with reading comprehension skills (e.g., ELLs). Thus, fewer students took the TRC than took the DIBELS. While all students in grade K-2 took the DIBELS in all three years, 94% of the students took TRC in the 2013-14; 93% in 2014-15; and 94% in the 2015-16 school year.

The school provided the researcher with data including the beginning and end of year scores on the DIBELS and TRC for the first two years (i.e., 2013-14 and 2014-15) of the RTI program. Since the study was completed prior to the end of the 2015-16 school year, the researcher was able to obtain only the beginning and middle of the year

data for the most recent year (i.e., 2015–16). Additionally, the DIBELS scores reported represented a composite score including six different subtests, the inclusion of which in the composite score depended on grade level. These six subtests included: (a) first sound fluency (FSF), (b) letter naming fluency (LNF), (c) phoneme segmentation fluency (PSF), (d) nonsense word fluency (NWF), (e) DIBELS oral reading fluency (DORF), and (f) sight word recognition (WR) (see Table 4 in Chapter III). More specifically, grade K received subtests FSF, LNF, PSF, NWF, and WR; first grade received LNF, PSF, NWF, DORF, and WR, and second grade received NWF, DORF, and WR.

Student Scores on DIBELS

As shown in Figure 9, at the beginning of the implementation of the RTI program (i.e., 2013-14), all students in grades K-2 took the DIBELS (n=259). While 58% (n=150) were performing at benchmark in reading at the beginning of the year, 25% were well below benchmark (n=66) and 17% were below benchmark (n=43). However, at the end of the 2013-14 school year, 78% (n=203) were reading at benchmark, and 11% (n=29) reading below benchmark, and 10% (n=27) still reading well below benchmark. Thus, at the end of the 2013-14 school year, 20% of the students that were reading either well below or below benchmark moved up to read at benchmark (n=53), whereas 22% of students continued performing well below or below benchmark by the end of the 2013-14 school year (n=56).

In the second year the RTI program was implemented (i.e., 2014-15), again, all students in grade K-2 took the DIBELS (n=252). While 62% of students were performing at benchmark at the beginning of the year (n=156), 21% were performing well below

benchmark (*n*=52) and 17% performed below benchmark (*n*=44). However, by the end of the 2014-15 school year, 77% were performing at benchmark (*n*=194), whereas 10% were performing well below benchmark (*n*=25) and 10% performed below benchmark (*n*=26). Thus, by the end of the 2014-15 school year, 15% of the students who were performing either well below or below benchmark moved up to perform at benchmark (*n*=38), whereas 20% of students continued performing well below or below benchmark at the end of the 2014-15 school year (*n*=51).

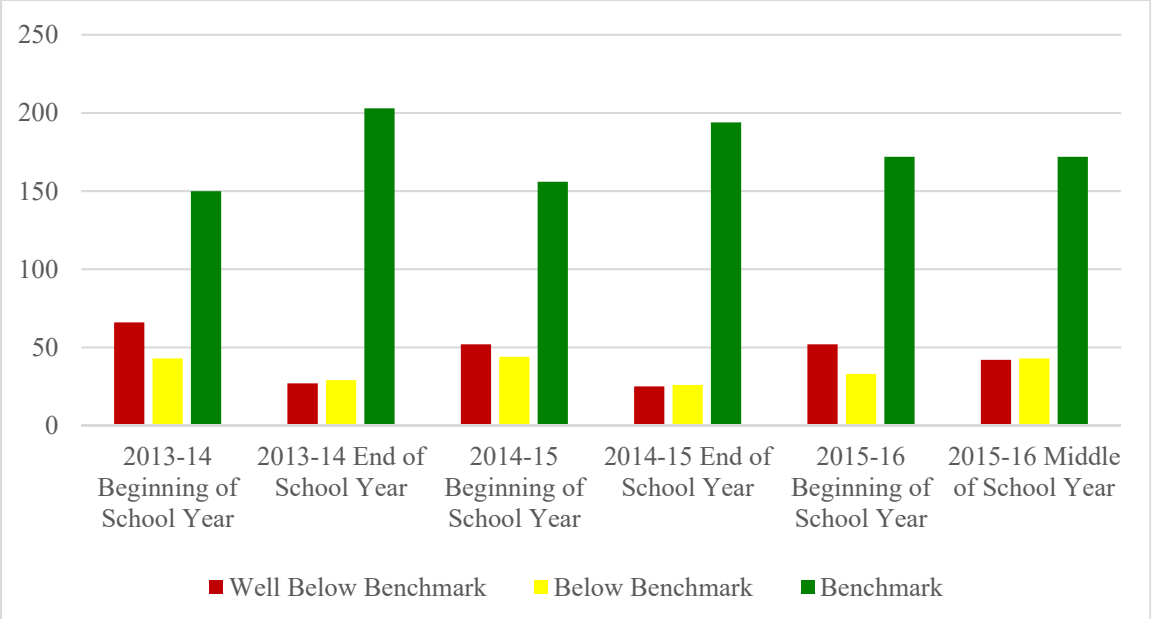

Figure 9. Performance of Students Based on DIBELS from 2013-14 until 2015-16.

As mentioned earlier, for the most recent school year where the study was conducted (i.e., 2015-16), the study concluded before the end of the year. Thus, the school provided the researcher with only the composite scores for the DIBELS at the beginning and at the middle of the school year. In the 2015-16 school year, all students in

grades K-2 took the DIBELS (*n*=257). While 67% were performing at benchmark at the beginning of the school year (*n*=172), 20% were performing well below benchmark (*n*=52) and 33% were performing below benchmark (*n*=33). By the middle of the 2015-16 school year, 67% were still performing at benchmark (*n*=172), whereas 16% were performing well below benchmark (*n*=42) and 17% were performing below benchmark (*n*=43). Although the number of students who were performing at benchmark in the middle of the most recent year didn't change (*n*=172), the number of students performing well below benchmark decreased by 19% (*n*=10).

Overall, the number of students performing at benchmark by the end of the year in the first two years of the RTI program increased. Additionally, the number of students performing well below or below benchmark had decreased by the end of the year for the first two years as well as the middle of the year for the most recent year when the study was conducted.

Student Scores on TRC

The school used the TRC in addition to the DIBELS to evaluate the reading comprehension skills for most of the students since the majority of the student population was classified as ELLs and 40% of the students received English as a Second Language services (ESL) (see Chapter III for more detail). As mentioned earlier, the entire student population took the DIBELS whereas only students who were struggling in reading comprehension skills took the TRC (e.g., ELLs). Thus, the total number of students assessed for each school year varies between the DIBELS and TRC. The proficiency levels for students on the TRC in grades K-2 from the 2013-14 school year until the

middle of the 2015-16 school year are shown on Figure 10 below. Unlike the DIBELS that has three performance categories (i.e., well below benchmark, below benchmark, and benchmark), the TRC has four categories based on proficiency (i.e., far below proficient, below proficient, proficient, and above proficient).

At the beginning of the RTI program implementation (i.e., 2013-14), 94% of students in grades K-2 who took the DIBELS also took the TRC (*n*=244). Twenty-nine percent were performing at a proficient level in reading comprehension at the beginning of the year (*n*=71), whereas 49% were performing far below proficient (*n*=120) and 22% were performing below proficient (*n*=53). At the end of the school year, 23% were performing above proficient (*n*=56) with 34% performing at the proficient level (*n*=84); 29% were still performing well below proficient (*n*=70) and 14% were below proficient (*n*=34).

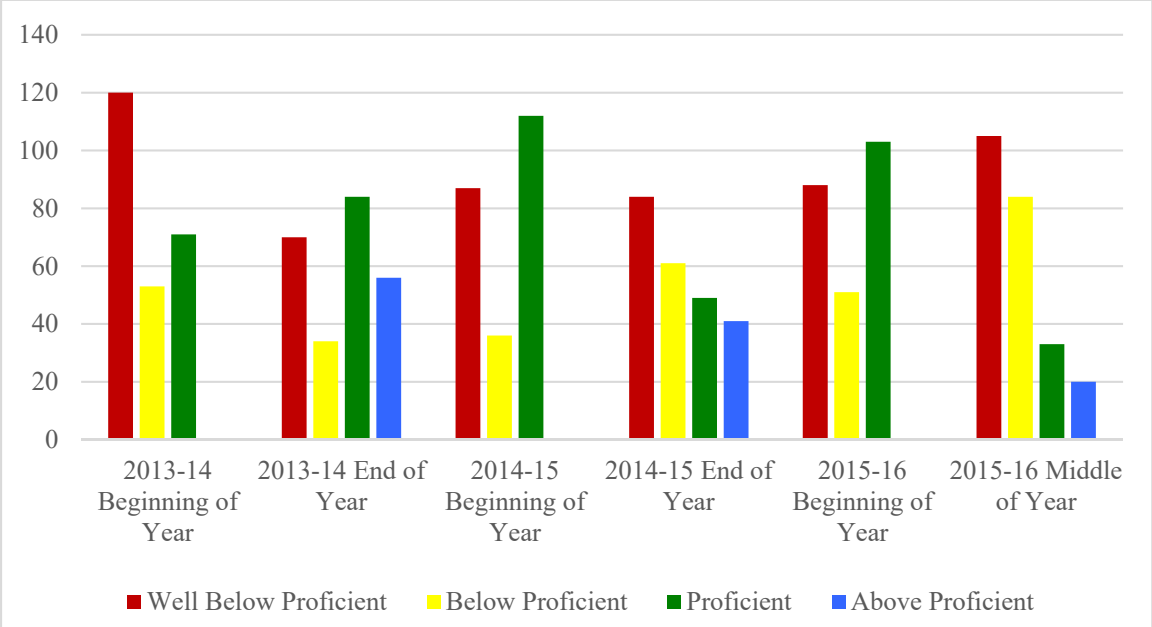

Figure 10. Performance of Students Based on TRC from 2013-14 until 2015-16.

For the 2014-15 school year, 93% of the students who took the DIBELS also took the TRC (*n*=235). At the beginning of the school year, 48% of students were performing at or above the proficient level in reading comprehension (*n*=112), whereas 37% performed well below the proficient level (*n*=87) and 15% performed below proficient (*n*=36). By the end of the 2014-15 school year, 17% were performing above proficient level (*n*=41) and 21% were performing at proficient level (*n*=49); 36% performed well below proficient (*n*=84) and 26% performed below proficient (*n*=61). Interestingly, the TRC data showing students' performance at the end of the 2014–15 school year showed that the number of students performing at or above the proficient level decreased by 22 (i.e., 20%). The number of students performing well below proficient decreased by 3 (i.e., 3%), whereas the number of students performing below proficient increased by 25, (i.e., 69%).

For the 2015-16 school year (i.e., when the study was conducted), 94% of the students who took the DIBELS also took the TRC (*n*=242). The study was over before the end of the year; thus, the researcher was only provided with TRC data for the beginning and the middle of the year. At the beginning of the school year, 43% of the students performed at the proficient level (*n*=103), whereas 36% performed well below proficient (*n*=88) and 21% performed below proficient level (*n*=51). However, at the middle of the school year, 8% (*n*=20) performed above the proficient level while 14% performed at the proficient level (*n*=33). Forty-three percent of the students performed well below proficient (*n*=105) and 35% performed below proficient level (*n*=84). In addition, while 43% (*n*=103) started the 2015-16 school year performing at the proficient

level, by the middle of the year the number of students still performing at the proficient level had decreased by 50 (i.e., 49%). Additionally, the number of students who performed well below the proficient level increased by 17 (i.e., 19%), and the number of students who performed below the proficient level increased by 35 (i.e., 65%). By the middle of the year, 8% of the students were performing above the proficient level (*n*=20).

The discrepancy between the students' performance on the DIBELS and the TRC is noteworthy. For example, looking at end-of-year data for the 2013-14 school year, 78% of students were at or above benchmark on the DIBELS as compared to 57% for the TRC. This pattern of difference was repeated in data reported for the end of the 2014–15 school year. Indeed, the percentage of students at or above benchmark on the DIBELS was 77% compared to 38% for the TRC.

Sustainability of RTI

As mentioned earlier, the researcher used an open coding strategy with the remaining interview data (Creswell, 2013; Maxwell, 2013). From that data, an additional theme representing educators' perspectives concerning the sustainability of the program emerged. The following section highlights the educators' perspectives regarding how the federal grant supported them in implementing the RTI program, and their concerns about the future of the program since the federal grant ended last year (i.e., 2014-15 school year).

Sustainability of RTI is at Risk Due to the End of Grant Funding

During the interviews, all 12 educators felt that the federal grant helped them implement the RTI program by funding needed administrative supports such as those

used for hiring extra staff, providing salary incentives for members of the leadership team, and conducting ongoing professional development and training for staff. Grant money also facilitated district support in the form of initial PD, technology, and OST in the form of technical assistance for the RTI leadership team members (Fixsen et al., 2013, 2005). However, seven of the educators worried about the grant being over. According to the principal, the money that they were using to support RTI during the year this study was conducted consisted merely of money carried over from the first two years of the grant and that no new funding was forthcoming to support the future implementation of RTI.

Not surprisingly, educators were afraid of having less support for the RTI program in the future, whether from the school administration or district. To illustrate, the principal indicated that the federal grant provided them with not only the funds for day-to-day RTI implementation, but also to send educators to a variety of conferences to better hone their RTI implementation skills. As he explained,

> I think it has been helpful that the [Federal grant] providing us the funding to send teachers to state and national conferences where they can learn more about it has been productive . . . We've sent teacher to the state reading conferences, we've sent a group of teachers to semi teacher leaders to some leadership conferences. We've gone to the Title I and EC conferences, and then come back and talk about how we can implement some of the stuff we learn there into our professional development plan here at school. So it's been nice because teachers for the past several years have not been able to go, there's been no professional development money, so it's nice for them to be able to go out and connect with other teachers from other schools and get ideas and come back and share.

One of the GETs said she was annoyed because the district mandated the RTI program to be implemented by the entire district, despite the fact that there was only one person who was considered to be an expert in RTI for the whole district. She said,

> I feel annoyed, I know it's a lot for just one person to do a whole district, so she has to teach the teachers at all the schools, and then all those teachers come back and teach the whole staff. So it's a lot of trickle-down theory, so it just makes us think that we need more support and education, people and money . . . It's not fair that you have one person trying to implement a whole program for literally a whole county. I mean one person can't do every single school and a whole county and be effective, so you need another person or another team of people to help her to do it, and to implement the program well if you wanted to work well.

When this school started implementing RTI, there were only three schools in the district that were part of that federal grant, so they all received the needed support from the district. However, since the school district mandated that all schools in the district implement the RTI program, the RTI program experts at the district level were spread too thin and could only be on site during the first and second years of the implementation. Because of this, the CC/LC stated that she was worried about the sustainability of their program,

> I think this year, as the program expands to more schools, she's [RTI expert from the district] not as available. She's always available to answer an email but she's not actually on site as much as she was in the past few years . . . So I feel like there was a handful of schools that kind of jumped on board early and really received some specific, targeted, professional development because there was only a handful of us. Now that they've gone district wide, maintaining the integrity of that is going to be a little bit more challenging because you've got a lot more schools needing the services of a few people. So I feel like in the past we've had a lot of support, but going forward it does make me worry a little bit that we're not going to have more personnel to support all the schools in the district.

The SES/interventionist felt that it would be beneficial to invest in the implementation of RTI in a similar manner to what the district did when they implemented Common Core,

> When we implement the Common Core, there was such huge push and we had to do 58 hours of training to get ready for Common Core, so I guess if . . . We could have done something similar with RTI and the intervention process . . . I guess it would be nice if we had that same level of interest and investment in [RTI] programs. I think the whole concept of intervention for a lot of general education teachers is so hard to understand. So I think if we had similar time and effort it would close that gap a little bit.

Further, the principal stated that the federal grant (i.e., TIF) helped him to support the program by hiring certified teacher assistants. As mentioned under the Administrative Support section, the majority of GETs, as well as other educators (i.e., SET/interventionist and CC/LC) valued the support of certified teacher assistants during the implementation of RTI, specifically during Tier 1+2 and Tier 2 intensive. For example, one of GETs was concerned about whether or not the school administration could continue to provide them with such support, especially after the federal grant was over when he said,

> I do feel like that every penny that's extra goes back to generating either a technology, something in technology that may help with the interventions or actual people. I think boots on the ground is better than technology right now . . . Right now it's like an actual person.

He also added that, "If it hadn't been for [The federal grant] we wouldn't have gotten about a days' worth, I think about 8 hours' worth of staff development on RTI [From the district], but because of the [Federal grant] we got that." Overall, therefore, seven of the

12 educators interviewed voiced concerns about the sustainability of the RTI program after the federal grant was over, and whether or not they would receive as much support from the school district in the future.

Summary

The findings of this study showed that educators' perspectives toward the implementation of the RTI program varied depending on their roles in the implementation process. While the school's RTI program had become a model for other schools in the district, the researcher found that some of the components of Implementation Science were not applied as needed (i.e., *Staff Selection*, *Pre-service Training*, and *Consultation and Coaching*) or sometimes were not applied at all (i.e., *Staff Evaluation* and *Program Evaluation*).

The data revealed that only two components of Implementation Science were thoroughly utilized: facilitated administration support and system intervention. The school principal was knowledgeable about RTI and provided a variety of supports to all educators in order to implement the program as needed. Regarding system interventions, all of the educators felt that the federal grant allowed the school administration, as well as the district to provide them with the needed support to implement RTI, and that its conclusion, and resulting loss of resources, threatened the sustainability of the RTI program.

The classroom observations revealed that, with respect to the teaching of reading, the degree of fidelity varied depending on the Tier, with fidelity being higher in the more intensive Tiers. The team observation revealed that the school appeared to be

implementing the other five critical components of RTI with fidelity. Last, student data on the DIBELS and TRC revealed a mixed picture, with student performance increasing in the DIBELS over the course of the project but less so on the TRC. This and all of the results are discussed in more detail in Chapter V, including the extent to which the research supports and/or extends the literature, as well as the study implications for future practice, research, and limitations.

CHAPTER V

DISCUSSION

This qualitative study aimed to provide a better understanding of a variety of educators' perspectives regarding Response to Intervention (RTI) implementation (i.e., as a phenomenon) through the lens of the seven core components of Implementation Science (i.e., the conceptual framework of this study). Two main research questions guided this study:

1. According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including, (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative support, and (g) system intervention?
2. To what extent is the school implementing RTI with fidelity and sustainability?

This chapter will begin by discussing the context of the study, followed by the findings as viewed through the lens of Implementation Science (Fixsen et al., 2013, 2005). The findings emerged through the data analysis and reflect the educators' perspectives towards the implementation of RTI based on the seven core components of implementation. Thus, each of the core components of Implementation Science is briefly described along with its connection to the findings and the research questions. The

chapter concludes by discussing the implications for practice, future research, and the research limitations.

Context of the Study

This study was conducted at a large urban Title I public K-5 elementary school in the southern part of the United States that was implementing RTI for reading for three years as part of a federal grant to increase the student outcomes on North Carolina End of Grade Tests (EGTs). Due to the study design and methodology, both the school and the participants (i.e., 12 educators) were purposefully selected according to study selection criteria. The majority of the students enrolled at the school were English language learners (ELLs) from Hispanic backgrounds (i.e., 67%); 40% of the school population received English as a Second Language (ESL) services.

The aim of phenomenological qualitative studies is to better understand a phenomenon by examining the common meaning of several people regarding their lived experience of that phenomenon (Creswell, 2013; Maxwell, 2013). Thus, the primary data sources employed were (a) in-depth, semi-structured interviews with a variety of school staff (N=12), (b) nine classroom observations of three general education teachers (GETs) during Tier 1, Tier 1+2, and Tier 2 intensive (n=3), (c) observations of two RTI team meetings, and (d) student outcome data in reading. Student outcome data were collected on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and Text Reading and Comprehension (TRC) assessments over the last three years (i.e., 2013-14, 2014-15, and 2015-16).

The conceptual framework of the study shaped both data collection and analysis. To answer the first research question, each educator was interviewed using questions based on the seven core components of Implementation Science, depending on his/her specific role in RTI. The interviews provided insights regarding each educator's perspectives toward the implementation of RTI. To answer the second research question, classroom and RTI team meeting observation were collected and analyzed to provide information regarding to what extent RTI was implemented with fidelity and sustainability. Student outcome data were collected as another way, albeit indirect, of interpreting the fidelity data. The findings are discussed in detail in the following sections.

Interpretation Through Implementation Science

The conceptual framework of this study is a validated model to implement evidence-based practices (EBPs; i.e., RTI) effectively, with fidelity and sustainability to produce the expected outcomes (Cook & Odom, 2013; Fixsen et al., 2013, 2005). Model implementation is ongoing, whereby each component/phase interacts with the other components, in such a way that a high quality implementation of EBPs is attained and sustained. Such an approach can also be used to identify gaps between research and practice that could be impediments to treatment fidelity (Fixsen et al., 2013, 2005; Halle, 2012). Data analysis revealed a number of major themes related to RTI implementation. These themes, interpreted below, are organized according to Fixsen et al.'s (2005) seven principles (see Figure 4 in Chapter II).

Staff Selection

The staff selection component can be accomplished in a variety of ways and appears to be dependent on organizational hierarchies. The staff (i.e., educators) are a critical component of implementing EBPs such as RTI since they involve the actual implementers, whether teachers or administrators, and thus significantly impact the quality of implementation. Previous research suggests that selection criteria of practitioners are an essential step in achieving the intervention's eventual expectations (Fixsen et al., 2013, 2005).

Participating in RTI was not a choice. The finding of this study regarding the staff selection component clearly showed that none of the educators (N=12) chose to participate or were selected to be part of the RTI process based on any criteria. They all revealed that they were required to participate in RTI since the school district decided to implement the program at their school as part of a federal grant. The fact that participation in RTI was not voluntary is important, as it could affect implementation (Denton et al., 2003; Fixsen et al., 2013, 2005).

When the selection of staff is not voluntary and the existing staff is required to implement a program, the school leaders (i.e., principals) have limited choices in selecting staff with the expertise needed to implement the program. Educators not selected voluntarily may be less invested in carrying out the program effectively, as they tend to be resistant or have negative perceptions toward any new initiative that is done in a top-down method (Hargreaves, 2004). However, a principal committed to the new initiative can overcome these shortcomings when they are able to purposefully select staff

with the needed experience to be on the RTI leadership team (Donnell & Gettinger, 2015).

For example, Donnell and Gettinger (2015) found that educators might have negative perceptions toward any new initiative (e.g., RTI) to change the school environment. In the real world, educators are most often not the drivers of school-reform, but are driven by others, such as policymakers (e.g., district and state) at a higher level who aim to improve educational outcomes by using a top-down managing method (Donnell & Gettinger, 2015). The reality is that in many educational settings, the staff selection and recruitment process follow preset routines and do not emphasize selecting staff with the necessary skills to implement RTI effectively (E. P. O'Connor & Freeman, 2012).

However, the finding of this study showed that staff selection problems could be overcome when a strong principal is committed to the innovation that is in place. In this study, the school principal believed that RTI was an effective approach and was enthusiastic regarding implementing such a program at his school. He felt that given its positive potential, implementing RTI at his school represented a great opportunity. Although participating in RTI did not change his hiring strategy in general (i.e., staff selection) and everybody in his school was expected to be part of the RTI process, he was able to select some leadership staff based on criteria including having the knowledge, skills, and willingness to be part of the RTI leadership team. Thus, he approached three staff members, specifically the special education teacher (SET/interventionist),

curriculum coordinator/literacy coach (CC/LC), and counselor (*n*=3), to play a major role and share the load and responsibilities with him in implementing the RTI process.

The approach taken by the principal is consistent with the findings by Printy and Williams (2015); namely, RTI, or any innovation, is more effectively implemented when leadership/responsibility is broadly shared between principal and other key educators in their school (Printy & Williams, 2015). Critical to the implementation of any innovation is staff willingness to share the load with colleagues, especially in difficult/challenging situations (Alsobaie, 2015; Danielson, Doolittle, & Bradley, 2007; Fuchs & Deshler, 2007). This is also consistent with the findings of this study in terms of sharing the load between staff as four general education teachers (GETs), SET/interventionist, CC/LC, speech language pathologist (SLP), psychologist, counselor, and principal felt that they there were a variety of support sessions held within the school (Alsobaie, 2015; Friend & Cook, 2013). For example, all GETs had a weekly professional learning team meeting (PLT) to prepare the personalized education programs (PEPs) for each student based on his/her specific needs. Also, staff continually redefined their roles and thought holistically about providing reading instruction not only for their own students, but also for other students in the same grade level (Friend & Cook, 2013; Jolly, 2008). This desire to serve all students is of particular note since the student population at the school was challenging; the majority of the student body was identified as ELLs, with 40% receiving ESL services. Further, a high number of students performed below grade level in reading with 67.5% of them having been classified as having less than sufficient command of reading (i.e., less than level 3) based on EGTs (see Figure 7 in Chapter III).

Pre-service Training

Pre-service training is a critical means of providing interveners with the knowledge, values, background information, theories, as well as the key practices that are essential to implement EBPs effectively (Fixsen et al., 2013, 2005). Educators must be provided with training in a safe environment to practice relevant skills and receive feedback when they are given the opportunity to practice these skills through role-play and modeling (e.g., in teacher preparation programs at the university level). Empirical research claims that pre-service training varies widely and must be useful and easily recognizable as beneficial by the people being trained in order for school reform to be implemented as intended (Fixsen et al., 2013, 2005).

Lack of preparation in RTI at university programs. This study found that there is a gap in the teacher preparation programs at the university level regarding preparation of teachers for the implementation of RTI; indeed, the majority of educators (*n*=9) indicated that they were not exposed to any specific preparation about how to implement RTI while attending their university programs. This lack of pre-service preparation was true for the GETs, regardless of when they graduated from college. Two of the GETs had graduated four and six years ago, well after the introduction of RTI in the educational law (i.e., IDEA, 2004). This lack of preparation is of concern given that RTI is described in IDEA as an approach to be used in inclusive settings, with GETs cast in central roles (Cortiella & Horowitz, 2014; U.S. Department of Education, Office of Special Education Programs, 2011).

It has been challenging for GET preparation programs at the university level to prepare their students to carry out RTI (Barrio, Lindo, Combes, & Hovey, 2015; Prasse et al., 2012), likely a result of the lack of GET preparation programs to prepare general educators to meet the needs of students who perform below or well below their peers in general. That said, research in the area of GET preparation in RTI at the university level is still rather limited and thus is in need of further study, (Barrio et al., 2015). Interestingly, while RTI is considered part of general education initiatives (Hazelkorn, Bucholz, Goodman, Duffy, & Brady, 2011; McCoun, 2006; Printy & Williams, 2015), and GETs are responsible for providing high quality universal instruction using EBPs to all students regardless of their risk status (Donnell & Gettinger, 2015; Printy & Williams, 2015) in the Least Restrictive Environment (LRE) (Cortiella & Horowitz, 2014; McLaughlin & Ruedel, 2012; Murdick et al., 2014), a number of researchers have found that SETs are better prepared than GETs to implement the RTI program (Greenfield et al., 2010). This was certainly true of the SETs in this study. Indeed, four of the educators (i.e., two GETs, SET/interventionist, and principal) stated that pre-service teacher preparation regarding RTI at the university level was part of Specialized Educational Services (SES) training. Moreover, the only educator who said that she felt prepared by a teacher preparation program at the university level was the SET. The school principal recognized her knowledge about RTI and thus assigned her to be part of the leadership team as an interventionist and teacher leader (Alsobaie, 2015; Friend & Cook, 2013).

Four of the six GETs emphasized the importance of not only having specific courses about RTI in their pre-service teacher preparation program at the university level,

but also having field experiences regarding this program in order to obtain more concrete knowledge about how it should be implemented. This finding is consistent with other researchers regarding the importance of field experience in teacher preparation programs in general. To illustrate, Prasse et al. (2012) suggested that, in addition to taking coursework on the topic, teacher candidates should have at least two semesters of field experience under the supervision of university faculty and mentored by expert teachers/schools to better prepare them to implement RTI when they enter the real world.

Furthermore, as part of such preparation, teacher candidates' beliefs, collaboration, and communication skills with other school staff should also be fostered (Prasse et al., 2012). In this study, the CC/LC indicated that she was lucky to have had that opportunity to learn skills such as teaching strategies and collaboration, skills helpful in implementing RTI (Prasse et al., 2012). In sum, preparation for RTI at the pre-service level is insufficient, for GETs, as discussed here, but also for psychologists, and school principals (Danielson et al., 2007).

Consultation and Coaching

Consultation and coaching is another critical ongoing component to help educators acquire and maintain knowledge and skills necessary for the effective implementation of RTI. Effective coaches and consultants have a variety of traits that are important, including being supportive, flexible, sensitive, available, diplomatic, encouraging, and willing to provide information, as well as share recognition for accomplishments (Fixsen et al., 2013, 2005). Empirical research has revealed that coaches and consultants need to be able to assume four roles in order to be effective: (a)

supervision, (b) willingness to engage effectively in the practices, (c) provide ongoing feedback and assessment when needed, and (d) provide emotional support for practitioners (Fixsen et al., 2013, 2005). Nevertheless, regardless of competence, the caseload of consultants or coaches can negatively impact the quality of the supervision and support that they can provide for practitioners, which also has an impact on the quality of RTI implementation (Fixsen et al., 2013, 2005). Therefore, in order to implement consulting and coaching effectively, the quality of consultant (i.e., experts) is as important as the quality of the consultation (e.g., professional development [PD] and ongoing support and training [OST]).

In-service preparation was helpful. The primary in-service strategy found in this study was intensive PD for five days prior to implementing RTI conducted by the district expert. While the finding of this study showed that all of the staff interviewed (*n*-12) received these five days of PD before the implementation of RTI, four GETs, the CC/LC, counselor, and principal (*n*=7) thought that the PD was helpful. The school principal stated that he had a variety of educators who did not have the necessary knowledge about RTI, because, as mentioned earlier, RTI implementation was not a part of their pre-service preparation. Thus, the principal felt that one of the main goals of the initial PD was to "level the playing field" for all school staff, given their different levels of knowledge and expertise. This is a common situation in the real world, especially in education settings, where it is difficult to control factors such as only selecting staff who have the necessary knowledge and skills to implement RTI effectively. The stressing of entry-level knowledge and skills likely explains why two GETs, SET/interventionist, and

SLP indicated that the PD was not helpful since it was not ongoing and did not provide them with explicit information or strategies to implement RTI. Two GETs also felt that the PD should include hands-on practice and experiences, and not rely exclusively on PowerPoint presentations.

Overall, criticisms of the in-service were consistent with Harlacher et al. (2010), who found positive effects for PD provided both prior to and during the implementation of RTI (i.e., ongoing), an approach consistent with best practice in the literature (Fixsen et al., 2013, 2005; Fuchs & Deshler, 2007; E. P. O'Connor & Freeman, 2012), and that should be sufficiently implemented with all educators, regardless of their length of teaching experience (Donnell & Gettinger, 2015). Other researchers have similarly recommended that schools invest more time and money to provide their staff with the important knowledge and skills to implement RTI effectively through OST (E. P. O'Connor & Freeman, 2012).

The majority of the interviews (*n*=10) revealed that the OST was provided by key members of the school's staff who were trained by the district's RTI expert and was consistent with these best practices, and thus more helpful. The school principal indicated that the federal grant was largely responsible for providing the resources to make such training for his staff possible. He added that the federal grant also allowed him to send some educators to specific national conferences and workshops to improve their knowledge and skills regarding the implementation of RTI (i.e., OST), a practice supported by a number of researchers who have made the point that providing educators with PDs alone did not guarantee permanent changes in educators' practices (Cook &

Odom, 2013; Pyle et al., 2011). Thus, OST provided by either trained school staff members or the school district can play a fundamental role in the establishment of effective implementation to reach the ultimate goal of the RTI program (E. P. O'Connor & Freeman, 2012).

While it is true that educators such as those interviewed here, desire explicit steps that can bolster RTI implementation (Pavri, 2010), Donnell and Gettinger (2015) make the point that the focus of in-service preparation should be on more than just the requirements of RTI implementation (i.e., "how to"), but it should also explicitly address the rationale and theory of RTI (i.e., "why") in order to provide educators with the reasoning behind implementing such an approach. These researchers added that going beyond the "how to" can also positively impact educators' beliefs about RTI goals and potentially lead to its being implemented more effectively (Donnell & Gettinger, 2015). Clearly, future research needs to address this issue of how to find the right balance in PD and OST between theory and practical guidelines.

Staff Evaluation

Evaluation of staff is necessary for assessing to what extent practitioners utilizing the knowledge and skills in the implementation process as well as the fidelity of implementation of EBPs such as RTI. Evaluation data provide valuable information regarding the effectiveness of interventions and programs, as well as the quality of educator preparation, be it pre-service training or ongoing consultation and coaching (i.e., in-service training; Fixsen et al., 2013, 2005). Evaluation represents more than an isolated data point. Rather it is a series of evaluations that entail a continual process providing

useful feedback to administration regarding the implementation process, as well as the quality, and usefulness of the program. Ultimately this information can be used to increase the overall effectiveness of the RTI program (Fixsen et al., 2013, 2005).

No formal evaluation of educators' roles in RTI. The findings of this study showed that in the unanimous opinion of all of those interviewed, there were no formal evaluations for their roles, either by school administration or the district. The study findings are not surprising in view of studies that have found a lack of clear evaluation guidelines, expectations, or rubrics at district levels regarding the evaluation of staff roles and procedures (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). Other researchers have also pointed to a lack of empirical guidelines to guide staff to implement and therefore evaluate RTI roles effectively (Cook & Odom, 2013; Pavri, 2010). Still other researchers have attributed the failure to adequately evaluate educators' roles in RTI to the lack of explicit guidelines in the educational law (i.e., IDEA; Cortiella & Horowitz, 2014; Flanagan et al., 2006; Printy & Williams, 2015; Zirkel, 2011). E. P. O'Connor and Freeman (2012) and Printy and Williams (2015) have made the case that given these problems, attempts to evaluate educators' roles would be haphazard and random.

Three GETs, and the SET/interventionist felt it would be beneficial to have a formal evaluation of their roles to ensure that they are implementing the program appropriately. Indeed, as Keller-Margulis (2012) has pointed out, RTI is a multi-tiered model comprised of a collection of complex activities. Thus, measuring fidelity of

implementation, while difficult, is critical (Carroll et al., 2007; E. P. O'Connor & Freeman, 2012).

Interestingly, most of the educators did not think evaluating their roles in RTI would be that difficult. For example, four GETs, CC/LC, SLP, and principal stated they could be evaluated by student progress, though, relying on student achievement outcomes may not be enough to determine the effectiveness of the components of RTI, such as the quality of interventions within each Tier and the decision-making procedures (Carroll et al., 2007; E. P. O'Connor & Freeman, 2012; Sparks, 2015). All six GETs, SET/interventionist, CC/LC, counselor, and principal felt that their roles in RTI could be informally evaluated merely by determining whether they carried out their roles in the process, demonstrating that they felt they had a basic understanding of the RTI process. Four GETs, the SET/interventionist, CC/LC, psychologist, and counselor thought that their roles could be evaluated based on their performance during RTI team meetings, Keller-Margulis (2012) has written that the RTI team meeting (i.e., intervention support team [IST] committee) is a key factor, not only to evaluate the effectiveness of the intervention (e.g., fidelity of implementation), but also to evaluate procedures for decision-making by reviewing and evaluating what had been done with each student. That said, the lack of explicit guidelines, as well as formal evaluation of the educators' roles could lead staff members to feel free to choose the actions/interventions that make sense to them, rather than implementing the actions/interventions that are truly effective (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015).

Three GETs and the SLP, counselor, and principal (*n*=6) indicated that their roles could be informally evaluated by a member of the RTI leadership team (e.g., principal). However, the principal stated that he was not offered any formal evaluation guidelines for the roles of his staff; nor did he recall any discussion regarding how to monitor the educators while implementing RTI, except for the periodic walkthrough observation employed during the Tier 2 intensive. Although the classroom walkthrough observation could provide some data about educators' roles while they implement RTI, Keller-Margulis (2012) has cautioned that the walkthrough observation is not comprehensive enough to reflect the true implementation of RTI. Further, educators could possibly change their behavior as a result of having an observer in the classroom. Therefore, in order to evaluate educators' roles in RTI, the leadership at the school level needs to learn strategies for periodically collecting data to check the fidelity of implementation of RTI, including evaluating the assessment practices, intervention and instructional delivery, and decision-making procedures (Carroll et al., 2007; Danielson et al., 2007; Keller-Margulis, 2012).

Program Evaluation

The aim of program evaluation is not only to gain data regarding the staff (i.e., educators), the consultation and coaching, or the fidelity of implementation, but also about the overall effectiveness of RTI within the organization (i.e., school) that implemented the program. In program evaluation, one of the main goals is to gain data regarding the effectiveness of the whole program that can then be used to improve and sustain its high quality in order to reach the expected outcomes of implementation. This

component could be done either by the administration of the organization, but mostly through the system (i.e., district, state) that provided the external support for implementing the program (Fixsen et al., 2013, 2005).

No formal evaluation of overall RTI program. All the educators in this study indicated that the overall RTI program at their school was not formally evaluated either by the district or state. One GET, SET/interventionist, and the CC/LC expressed a desire for a formal evaluation of the RTI program by the district or the state. They felt it would be beneficial to know if they were going in the right direction to achieve the intended goals of RTI. Indeed, without a mechanism for evaluation, RTI can become unfocused and scattered, and ultimately unsustainable (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015).

As with the issue of RTI role evaluation discussed above, the educators interviewed had specific ideas with respect to how they thought an RTI program evaluation could be done. SET/interventionist, CC/LC, SLP, counselor, and principal suggested that the overall RTI program could be evaluated based on the number of students referred to SES (e.g., learning disabilities [LD]) after the program was implemented, with fewer students referred being a marker of student success. RTI was originally introduced in IDEA, 2004 as an alternative/optional means to identify students with LD (Cortiella & Horowitz, 2014; Johnston, 2010; Yell, 2012; Zirkel, 2010).

However, using the number of students referred may cause schools and districts to pay less attention to other critical components related to treatment fidelity, such as educators who are responsible for implementing the program, technology, the

environment where the program was implemented (Carroll et al., 2007; Keller-Margulis, 2012; Sparks, 2015), and the quality and quantity of district support (E. P. O'Connor & Freeman, 2012). Also, while, as in this study, RTI has been shown to reduce referrals to SES (e.g., R. E. O'Connor et al., 2005; Robinson et al., 2013; VanDerHeyden et al., 2007; Wanzek & Vaughn, 2011), other researchers have argued that the decrease in the number of students referred to SES may not be an indicator of success, but simply a delay of services that could be detrimental to students, like the "wait-to-fail" model RTI was intended to replace (Heasley, 2016). Such delays could also potentially increase the overall cost of RTI (Fuchs, Fuchs, et al., 2012; E. P. O'Connor & Freeman, 2012).

It is perplexing that, even though no formal evaluation of the program had been conducted, two GETs and the principal expressed that the RTI program was successful since it was viewed as and became a model for the school district, despite the fact that the district had never formally evaluated it. Indeed, the district had only one person who was considered to be the RTI expert for the entire school district and she had little involvement in the program at the school where the study was conducted. This lack of effective district leadership is a concern in view of E. P. O'Connor and Freeman's (2012) finding that the most successful RTI schools they observed had leadership teams at the district that were knowledgeable about RTI and provided systematic procedures by expert personnel to make decisions regarding the effectiveness of these programs (E. P. O'Connor & Freeman, 2012).

It seems likely that the school was viewed as a model simply because it started the implementation of RTI one year before most of the schools in that district. The district

perception of the program as exemplary proved problematic, since it may have caused the district to not replace the funding to the school that had been significantly reduced when the grant expired. This reduction in resources appeared to threaten the sustainability of the project, and is contrary to E. P. O'Connor and Freeman's (2012) recommendation that school districts structure RTI program support and evaluation based on performance data, not the number of years the school has been implementing the program.

Facilitated Administrative Supports

Facilitated administrative support involves key members of leadership in the organization (e.g., principal) as a part of the decision-making process as a way to facilitate the procedures involved in RTI, as well as to make sure that the staff are focused on implementing each aspect of the program effectively in order to reach the expected outcomes (Fixsen et al., 2013, 2005). In this component, the key role of the leadership (e.g., principal) is not limited only to promote the implementation of each component and evaluate whether or not it was implemented as needed. The leadership also must promote the overall program and be a link between the organization (i.e., school) and the system intervention (i.e., district, state) in order to determine the needs of the school (i.e., financial fund, PDs, OST, and external experts) that should be provided by the system intervention (i.e., district or state; Fixsen et al., 2013, 2005).

Administration was supportive. The findings of this study indicated that all the educators felt that the administration (i.e., principal and leadership team) provided them with the needed support to implement RTI such as highly qualified staff members including SET/interventionist (i.e., teacher leader), CC/LC, and counselor, who helped to

provide OST and were available whenever needed. This finding is consistent with other studies (e.g., Printy & Williams, 2015; VanDerHeyden et al., 2007) that found that school leadership was a key factor in the support needed to implement the RTI process, evaluate the program effectively, and make any changes as needed. In the present study, the school principal established weekly PLT and RTI meetings led by the CC/LC and counselor to provide all educators involved in RTI with needed support, as well as evaluate the effectiveness of the program, and made changes when needed.

The findings of this study are also consistent with other studies (e.g., Koutsoftas et al., 2009; Pavri, 2010) that have demonstrated the value of teacher assistants in RTI program implementation. Five GETs, SET/interventionist, CC/LC, and principal indicated that the administration provided resources that funded classified trained teacher assistants who helped GETs, especially in implementing Tier 1+2 and Tier 2 intensive. While the principal did play a critical role in supporting the RTI process, the distribution of leadership between the school principal and some of the key staff members (e.g., teacher leader) has also been supported by the literature as an essential strategy having a potentially positive impact on program effectiveness, including student achievement (Alsobaie, 2015; Friend & Cook, 2013; Printy & Williams, 2015). This is especially true as teacher leaders and other key members tend to be more available to handle issues when they arise without going through a top-down approach within the school building. Thus, having additional authority figures who can handle the demands of the intervention can help the key educators resolve problems that arise faster, without going through the

traditional top-down process involving school-level administration (i.e., principal) (Alsobaie, 2015; Friend & Cook, 2013).

Although the findings of this study revealed that the principal was knowledgeable about RTI, he did not provide educators with clear and explicit expectations about the implementation of RTI, except during the walkthrough classroom observations during the Tier 2 intensive. This finding is contrary to recommendations such as those provided by Danielson et al. (2007), who recommended that the school administration be committed to not only providing adequate resources and support for the implementation of RTI, but also provide staff with explicit expectations and goals for implementing the RTI program (Danielson et al., 2007). As already said, walkthrough observations alone are not enough to provide staff with explicit feedback, procedures, and directions needed for program implementation (Keller-Margulis, 2012).

One of the most salient and important comments made by all of the educators was that the principal was fully aware of the pressure on his staff and willing to help; he was also available to answer questions at any time. The principal himself felt that the best way to support his staff was by trusting and encouraging them to work collaboratively, without him dictating every detail involved in the implementation of the RTI process. This finding is consistent with that of Hallam, Smith, Hite, Hite, and Wilcox (2015) who found that trust and collaboration between educators and administration (i.e., principal and leadership team) were vital when implementing EBPs, as is sharing teaching strategies between educators as a way of improving educators' instruction, student outcomes, and the functioning of the entire school environment.

Trust between educators and administration can also increase positive relationships and collaboration among school staff, especially between the members of the team who meet periodically within the school (e.g., PLT and RTI team meetings) (Chrisman, 2005; Friend & Cook, 2013; Hallam et al., 2015). This seemed to be the case at the school in this study, as the team meeting observation revealed a high degree of collaboration among staff when making decision. Printy and Williams (2015) have recommended that the principal also be closely connected to his/her staff in terms of their instructional practices, as well as sharing the load with them in reviewing and interpreting student data to make appropriate decisions, all qualities that appeared to be in evidence with this principal. In general, the engagement of school leadership (e.g., principal) with school staff in the implementation of RTI is a critical factor that substantially influences the success or failure of the RTI implementation process (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015; Sansosti et al., 2011). Most poignantly, based on the majority of the educators in this study, the principal surpassed expectations.

System Intervention

System intervention is an essential component that plays a key role, not only in improving the overall implementation of EBPs, but also in providing the needed support to implement the intervention effectively with a high level of fidelity and sustainability (Fixsen et al., 2013, 2005). This component is designed to connect the organization implementing RTI (i.e., school) with external organizations (i.e., district, state) that guarantee the availability of needed support to improve the overall program, as well as for each of the components when needed. In the system intervention component, support

can be delivered to the organization (i.e., school) as financial funds, PDs, OST, or outside experts, all of which can help to close gaps in the implementation of RTI and help maintain a high quality of implementation to reach the intended outcomes (Fixsen et al., 2013, 2005).

District provided PD and technology. In this study, educators' thoughts regarding the helpfulness of district support were mixed. Five educators felt that district support in the form of initial PD as well as the provision of materials and technology needed to implement the program were helpful. However, four of the educators interviewed felt these supports were not sufficient to implement RTI successfully. E. P. O'Connor and Freeman (2012) found that in order to implement an RTI program effectively, districts should provide educators with sufficient OST in assessment concepts and techniques, as well as interpreting the data collected to adequately guide instructional practices.

E. P. O'Connor and Freeman (2012) also recommend that the district have a team of personnel with expertise in all of the RTI components in order provide on-site coaching and OST for educators in all schools implementing RTI. In the school involved in this research, the district employed a "train the trainer" approach (E. P. O'Connor & Freeman, 2012), with only the members of the RTI leadership team, including the SET/interventionist, CC/LC, counselor, and principal provided with OST by the district RTI expert, and that occurred only in the first and second year of implementation. The literature states that the RTI coach providing the OST to the school staff needs to be supported as well, working under the close supervision of the district's team of RTI

experts (e.g., E. P. O'Connor & Freeman, 2012). Otherwise, the effort becomes "one and done" and thus not sufficient to deliver the necessary support with the requisite depth of knowledge to implement RTI with a high level of fidelity and sustainability (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015).

As already reported, the findings of this study revealed that the district had only one RTI expert whose involvement with the school's RTI project became increasingly more limited as the district decided to expand the implementation of RTI to all schools in the district. This reduction in support was a concern to seven of the educators who felt that support needed to be continued into the third year. Certainly the issue of how and when to reduce support is important for project sustainability (Fixsen et al., 2013; E. P. O'Connor & Freeman, 2012) and is in need of future research. Many researchers have argued that, unless educators are trained and provided with the essential materials and technology along with systematic and sufficient OST, the outcomes of educational innovations would be negatively affected, and the intended goals not reached (Danielson et al., 2007; Fixsen et al., 2013, 2005; E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). All of these supports require an appropriate level of funding (Fixsen et al., 2013, 2005; E. P. O'Connor & Freeman, 2012). In the school studied here, contrary to the recommendations of other studies (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015; Fixsen et al., 2013), seven of the educators interviewed worried about the future sustainability of the RTI program at their school due to reduced funding, an issue discussed in more depth in the sustainability section later in this chapter.

Educators' Feelings toward RTI

It is clear that the implementation of RTI in any school requires changing educators' roles and strategies in their daily instructional practices, as well as the school system in general (Fuchs, Fuchs, et al., 2012; Printy & Williams, 2015; Rinaldi et al., 2011; Tilly et al., 2008). Many researchers have argued that educators are critical for successful implementation as they are charged with carrying out the program in the real world (Donnell & Gettinger, 2015; Fixsen et al., 2013, 2005; Greenfield et al., 2010). However, the educators' perspectives (e.g., feelings) toward RTI are hardly ever studied (Greenfield et al., 2010; Printy & Williams, 2015) and they are mostly excluded from discussions regarding school reform initiatives (e.g., RTI) (Darling-Hammond, 2009; Donnell & Gettinger, 2015).

Some educators tend to resist any school reform efforts due to the primarily top-down model from higher-level policymakers (i.e., district and state) (Donnell & Gettinger, 2015). Additionally, researchers often disseminate information about school reform approaches (e.g., RTI) utilizing vehicles not commonly used by educators, such as journal articles. As a result, many educators not only resist new educational reforms or initiatives such as RTI, but also are increasingly mistrustful of new school reform efforts presented by policymakers (Donnell & Gettinger, 2015; Hargreaves, 2004).

Findings Related to Educators' Feelings

In this study, one GET, the SET/interventionist, CC/LC, counselor, and principal felt that RTI was challenging to implement and they struggled to apply it as needed during the first year. However, the staff felt that implementing RTI became easier after

three years of implementation and they ultimately found it to be a successful experience. These findings are consistent with other studies (i.e., Printy & Williams, 2015; Rinaldi et al., 2011) who found that RTI is not an easy approach to implement and that educators struggle to implement its different components, especially the assessment of students (e.g., universal screening and progress monitoring; Printy & Williams, 2015; Rinaldi et al., 2011). Yet, the fact that it became easier to implement over time is indeed encouraging.

Printy and Williams (2015) found that educators felt that the implementation of RTI added more responsibilities such as meetings and increased data keeping; they also reported that teachers felt that the process needed to be more efficient, an issue for future implementers to tackle. In this study, three GETs, SET/interventionist, CC/LC, and principal felt that the implementation of RTI helped educators be more focused and to more precisely target the specific needs of each student. This aligns with other studies (Greenfield et al., 2010; Printy & Williams, 2015; Rinaldi et al., 2011) that found RTI to be a helpful approach for meeting individual student needs, including increasing the accuracy of the referral process.

It is noteworthy that both kindergarten teachers felt that the RTI program would be more beneficial for students who were older and/or had more prior knowledge of reading, likely because the majority of their students were ELLs. Their rationale for thinking why RTI was inappropriate for their students is similar to that reported by Hardin et al. (2009), who found that teachers felt it was unfair for ELLs to be screened for reading skill deficiencies and to be expected to perform similarly to their native

English-speaking peers. The kindergarten teachers in Hardin et al.'s (2009) study felt that students needed additional time to acclimate to school. Both the teachers and administrators felt that the federal and state regulations should test children in their native language prior to screening their English proficiency (Hardin et al., 2009).

Interestingly, in other studies of RTI implementation conducted with students in grades K-5, in schools that had a high percentage of ELLs, no similar problems involved in assessing ELLs in grade K were raised (i.e., Greenfield et al., 2010; Rinaldi et al., 2011). Indeed, the perceptions of the two kindergarten teachers in this study would seem to be in opposition to researchers who have argued that one of the main purposes of RTI is the early identification of children at-risk for having reading problems with the goal of linking them to a system of interventions to prevent many reading difficulties and even disabilities (e.g., LD; Bryant & Barrera, 2009; Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Printy & Williams, 2015; Yell, 2012; Zirkel, 2010). Was the intent of the approach recommended in IDEA 2004 as an alternative to more traditional "wait to fail" models of identifying students with LD (Burns et al., 2008; Bursuck & Damer, 2015; Cortiella & Horowitz, 2014; Flanagan et al., 2006; Yell, 2012; Zirkel, 2011)? It would seem to be more productive to tweak the current assessment/intervention guidelines to make RTI more appropriate for ELLs by both testing and teaching in students' native language and focusing on systematic, explicit instruction in spoken English. More specific suggestions for making RTI more appropriate for ELLs are included in a later section of this chapter.

The SLP and psychologist worked in the school studied, while working at other schools within the same district. They noticed and expressed concern that implementation varied from school to school with respect to key parts of the model such as the types of interventions employed, the frequency of progress monitoring assessments, as well as their particular roles in the RTI decision-making process. This finding is consistent with that of several studies that have also found differences in the implementation of RTI among schools, districts, and states, reflecting a lack of consensus about the way RTI should be implemented (Balu et al., 2015; Fuchs & Vaughn, 2012; Kerins et al., 2010; Sparks, 2015; Zirkel, 2011). Certainly, part of the problem is the lack of clear and explicit guidelines for educators about how to implement the RTI program, either at the district level (Cook & Odom, 2013; E. P. O'Connor & Freeman, 2012; Pavri, 2010; Printy & Williams, 2015), the state level (Flanagan et al., 2006; Zirkel, 2011) or federal levels (i.e., IDEA; Cook & Odom, 2013; Cortiella & Horowitz, 2014). Additionally, Printy and Williams (2015) found that, as was the case in this study, educators guided the implementation of RTI according to their specific interpretations, not a set of empirically-derived guidelines. While aspects of the many components of RTI have been validated (Bursuck & Damer, 2015; Hughes & Dexter, 2011), much more research needs to be conducted on RTI models as a whole and ultimately such investigations will need to be brought to scale.

Fidelity of Implementation

Many researchers have indicated that in order to reach its intended goal, RTI, must be implemented by trained educators with a high level of fidelity (e.g., Carroll et al.,

2007; Fixsen et al., 2013, 2005; Keller-Margulis, 2012). As mentioned previously, the use of student outcomes by itself is not enough (Carroll et al., 2007; Keller-Margulis, 2012). One of the main goals of using Implementation Science (i.e., the conceptual framework of this study) is to facilitate fidelity of implementation and by so doing have a positive impact on the overall RTI program (Carroll et al., 2007; Fixsen et al., 2013, 2005). As educators are responsible for implementing RTI in the real world, researchers have recommended that the fidelity of implementation be evaluated systematically and periodically in order to obtain reliable information regarding the extent to which educators are appropriately implementing their interventions. For example, Keller-Margulis (2012) recommended the fidelity of implementation of RTI programs be periodically evaluated on an ongoing basis by school leadership (e.g., principal), focusing on decision-making processes, the delivery of instruction, and student assessment practices. School administration should monitor the fidelity of implementation using a variety of ways, including periodic unscheduled observations that utilize measures that are direct, explicit, valid, and reliable to assess adherence of implementation to established procedural guidelines for implementing RTI appropriately (Carroll et al., 2007; Keller-Margulis, 2012). A major contribution of this study is that it is the only study examining educator perceptions of the RTI process that also collected fidelity of implementation data.

Findings Related to Fidelity

Classroom observations. As reported in the results, no formal evaluations of the overall RTI program nor of educator roles in its day-to-day implementation were

conducted. However, the researcher was able to collect some fidelity data by randomly selecting and observing three GETs, one from grades K, one, and two, with each GET observed at three different intervention settings: Tier 1, Tier 1+2, and Tier 2 intensive. As reported in the results, in general, all three GETs were conducting their Tiered instruction with a high level of fidelity and the percentage of fidelity increased as the intensity of the interventions increased (see Table 5 in Chapter IV). As covered in Chapter IV, one reason for the increased fidelity in the more intensive Tiers was the presence of teaching assistants, the benefits of which has been validated previously by Vadasy, Sanders, and Peyton (2006), who showed that providing extra literacy assistants helped GETs in grades K-2 teach more effectively. Hauerwas and Goessling (2008) have also found that trained teacher assistants are critical members of the instructional team, not only to deliver instruction, but also to help students stay on task and monitor their progress. Teacher assistants may be especially beneficial with ELLs. For example, Kamps et al. (2007) found that using small group instruction provided by teachers and their assistants significantly improved ELL students' reading outcomes.

While overall fidelity was acceptable, the GETs level of fidelity of 70% in Tier 1 was not. Upon closer inspection of each component of the observation protocol (see Appendix B), it was evident that the GETs focused primarily on reading skills involved with word identification such as phonological awareness, decoding, and fluency, whereas less attention was paid to comprehension skills. For example, the observation protocol had specific items under two components (i.e., components five and six) about reading comprehension (e.g., using students' native language to help them comprehend the text,

and checking their comprehension by asking questions). In Tier 1, none of the educators focused on these items and the items were therefore checked as "not observed." Similarly, in Tier 1+2, most of these items were not checked as "observed," and in Tier 2 intensive, only one of the GETs was observed as focusing on these items.

These findings are disturbing, given the importance attributed to the use of children's native language, as well as systematic and explicit vocabulary and comprehension instruction in general for ELLs (Escamilla, 2007; Getting Smart et al., 2016; Haager et al., 2010). This phenomenon of placing too little emphasis on comprehension has been found in other studies such as the 2008 evaluation of the federal Reading First program (Gamse, Jacob, Horst, Boulay, & Unlu, 2008), an issue discussed in more detail in a later section covering student reading achievement outcomes.

Team meeting observations. As mentioned earlier, the implementation of RTI in any school requires changes in educators' roles and their instructional practices, as well as the organization of the school and even the larger school system (Fuchs, Fuchs, et al., 2012; Printy & Williams, 2015; Rinaldi et al., 2011; Tilly et al., 2008). One such area of change is in collaborative decision-making efforts. In order to sufficiently implement RTI, educators must work collaboratively at all school levels (i.e., staff members and leadership team; Fuchs, Fuchs, et al., 2012; Printy & Williams, 2015). A high level of collaboration is more likely to be attained when schools establish an RTI team that includes leadership and other key staff members (i.e., multidisciplinary team) as stakeholders in the process (E. P. O'Connor & Freeman, 2012).

The researcher observed two multidisciplinary RTI team meetings, and found that the meetings were collaborative, and, to the extent possible when only observing two meetings, showed that RTI decision-making was being carried out as the project intended. The observations also revealed that the RTI team meetings functioned as a mechanism for promoting and evaluating the quality and effectiveness of GET implementation (see Table 6 in Chapter IV). Indeed, in their interviews, eight educators indicated that for any student who was unresponsive to the most intensive intervention provided in the general education setting (i.e., Tier 2 intensive), referral to the RTI team was mandatory and everything tried with the student had to be documented in his/her PEP. It is true that there were collaborative decision-making efforts among GETs and other members of the RTI team who were also part of the RTI leadership team (i.e., SET/interventionist and counselor). However, the GETs seemed to have less power in the decision-making process during the RTI meetings. This finding is consistent with Shapiro et al.'s (2012) observation that GETs' judgments were considered to be subjective and often ignored when making decisions during the RTI team meeting. This unequal distribution of power is contrary to Friend and Cook's (2013) recommendations that educators should have an equal say in the process and in setting mutual goals, as well as sharing resources and responsibility for program outcomes. Also, heeding teacher judgments may help allay U.S. Department of Education's concerns that RTI is being used in many schools as a means to delay or deny referrals of some students to SES (Heasley, 2016).

The results of the team observations also revealed that the team made its decisions largely based on a single data source; namely reading student achievement either on the DIBELS or TRC. As the chair of the RTI team (i.e., counselor) said,

> Students come to the IST [RTI] team with PEP, so that's just kind of given . . . We have the school psychologist, the referring teacher, me, and an interventionist for K-2, and an interventionist for 3-5. So . . . [We] identify the exact problem that the student is experiencing, it's not I think or I feel, we have to have data [DIBELS and TRC] to show exactly where that student is. So each week I send out an agenda to the committee with the student's name that we will be meeting on, and I ask the teachers to bring the data with them to the meeting.

However, a number of researchers have cautioned against such an approach, warning that relying solely on a single data source (i.e., student data) may result in decisions that are less accurate (e.g., Danielson et al., 2007; Fuchs, Compton, et al., 2012). Additionally, direct daily observations of students by GETs under actual learning conditions can provide information that a single test score cannot, and thus enhance the RTI decision-making process (Shapiro et al., 2012).

Student data. In North Carolina, where this study took place, EGTs are mandated for students in the third grade or above. Given that the focus of this study was students in grades K-2, the only data regarding student performance in reading available for the past three years were the results of DIBELS and TRC (see Table 4. in Chapter III).

Many schools across the nation implementing RTI use DIBELS to screen for reading problems and evaluate the effectiveness of reading interventions by monitoring student progress (Balu et al., 2015; Bursuck & Damer, 2015). The finding of this study regarding student performance on DIBELS showed that overall student performance from

the beginning to the end of the school year increased for the two years for which beginning and end-of-the year data were available. To illustrate, by the end of the first year, 78%, and by the end of the second year, 77% of all students in grades K-2 had reached benchmark levels (see Figure 9 in Chapter IV).

While the improvement in DIBELS scores is consistent with those of other studies (e.g., Catts, Nielsen, Bridges, Liu, & Bontempo, 2015; Shapiro et al., 2012), it is difficult to attribute this improvement to the RTI program, as the design employed was not experimental in nature. Most important, however, is that there was growth according to the DIBELS but not the TRC (see Figure 10 in Chapter IV). This difference in progress is likely because DIBELS focuses on factors related to word identification such as phonological awareness, decoding, and reading fluency while de-emphasizing comprehension skills (Balu et al., 2015; Bursuck & Damer, 2015; Riedel, 2007; Samuels, 2007; Sparks, 2015).

The discrepancy in results between DIBELS and TRC is of particular importance since the majority of the students in grades K-2 at this school were ELLs. As noted by a number of researchers (e.g., Escamilla, 2007; Getting Smart et al., 2016; Haager et al., 2010; Vaughn & Briggs, 2003), the decoding skills of ELLs can improve rapidly, but their comprehension skills are more resistant to change. Thus, there is a critical need for RTI reading assessments to focus on both decoding and comprehension. That is why the school appropriately used the TRC in addition to the DIBELS in the first place.

Of course the fact that the TRC showed little student growth is also of major concern. The format of the TRC itself could have accounted for the result since it requires

students to answer comprehension questions that are written in English and that necessitate a student response in oral English. According to Escamilla (2007), the reading comprehension skills of ELLs frequently surpass their production skills in English. Indeed, students may have a solid understanding of a text that they read in English, but have difficulty talking or writing about it in English. Thus, if those students had had the opportunity to use their native language to express what they read in English, they may have fared better, a point reinforced by the comments of one of the kindergarten GETs.

> In fact, there was something we would love because over 80% of our students are Hispanic or speak Spanish, can we get this [Evaluation tools] in Spanish? So she [Teacher leader] didn't know the answer, so she said of course no you can't, but that would be really good and seems like that would be something they [School distract] could figure out.

Therefore, it is more appropriate to use multiple screening and testing tools that can help to provide a complete and more accurate picture about the student's skills when implementing RTI, especially with ELLs' comprehension skills (Escamilla, 2007; Getting Smart et al., 2016; Haager et al., 2010; Vaughn & Briggs, 2003). Of course, as discussed in the previous section, the failure to make gains in comprehension was likely also due to the fact that the reading interventions used failed to adequately focus on oral language and reading comprehension. The lack of reliable and valid methods to evaluate the comprehension skills of ELLs renders the process of evaluating the effectiveness of RTI difficult with this specific population, and Implementation Science as well.

The disappointing achievement results are consistent with those of a recent large study conducted by Balu et al. (2015), who, in a study of a multi-year implementation of

RTI in schools in thirteen states, found that RTI did not positively impact student outcomes. E. P. O'Connor and Freeman (2012) reported similar findings in several other schools across the country. The failure to increase student achievement significantly is of special concern given the fact that implementation of RTI has rapidly increased among schools and districts across the nation, as 70% of districts are currently implementing RTI (Sparks, 2015). E. P. O'Connor and Freeman (2012) have explained the mixed record of RTI implementation using an apt metaphor.

> Many schools/districts seem to have gotten on the RTI highway in the past decade, but not all are making progress toward the destination of improving student outcomes. A few schools seem to have found the "fast lane" and are on cruise control, but some schools are feeling lost. Further, some schools are looking for the next exit, as they are tiring of the journey, and some are on the side of the road with a flat tire. (p. 297)

For schools struggling with the implementation of RTI, there has usually been a lack of district-level support that has a negative impact on the ways that RTI can be implemented effectively (E. P. O'Connor & Freeman, 2012). All of this said, as pointed out previously, the use of a single measure might be insufficient to judge the effectiveness of the RTI model. Therefore, efforts to evaluate the effectiveness of RTI need to include multiple measures of student achievement, as well as measures of treatment fidelity related to the range of instructional practices employed in RTI models (Carroll et al., 2007; Danielson et al., 2007; Shapiro et al., 2012; Sparks, 2015).

Sustainability of RTI

Researchers have indicated a critical aspect of implementing any new school reform initiative (e.g., RTI) in the real world is program sustainability, accompanied by a

high level of fidelity, in order to reach its intended goal (Denton et al., 2003; Fixsen et al., 2013, 2005). E. P. O'Connor and Freeman (2012) have posited that the leadership at the school district can promote the sustainability of RTI programs by providing the necessary supports. This support is not limited to resources, whether financial, OST, supervision, or evaluation, but also includes having in place a leadership team at the district level as well as procedures to evaluate the effectiveness of RTI. Lacking these conditions, RTI would not likely be implemented effectively and sustainably (E. P. O'Connor & Freeman, 2012).

Findings Related to Sustainability

The findings of this study regarding program sustainability are consistent with a growing literature on this topic (e.g., Denton et al., 2003; Fixsen et al., 2013, 2005; E. P. O'Connor & Freeman, 2012). In this study, a majority of the educators interviewed were worried about the future of their RTI program for several reasons. First, the grant that allowed them to implement the RTI program with all needed support a few years ago ended in 2014-15, though there was some carryover money allocated solely for implementing the RTI program in the 2015-16 school year.

Second, the school district decided to expand the implementation of RTI district-wide, even though there was only one person at the district level with expertise in RTI implementation. Third, the district expert provided the leadership team with what they perceived as helpful OST during the first two years of implementation, but her level of support was significantly diminished due to the district expansion of RTI. Most of the

RTI staff felt they needed continued OST from the district expert in order to maintain the level of implementation attained during the first two years.

A lack of sustained district support for RTI brought about by a reduction in resources allocated for its implementation has been reported by school leaders (i.e., principals) as one of the factors having a negative impact on RTI programs at their schools (E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). The lack of district support regarding the implementation of RTI has led principals to rely more heavily on themselves and make decisions about RTI based on their interpretation of how they should implement the program (Printy & Williams, 2015). That said, providing adequate financial support for programs such as RTI is a national issue, as budget reductions often lead to program cuts, regardless of the impact of these programs on student outcomes (E. P. O'Connor & Freeman, 2012). In this study, the modest gains in achievement made during the first two years were already showing signs of diminishing in year three. While short periods (e.g., two years) of start-up money can initiate program implementation, short-term funding does not guarantee sustainable program growth (Baker, Gersten, Dimino, & Griffiths, 2004).

Oftentimes districts support schools that are implementing RTI by providing school staff with in-service training (i.e., initial PD), including reimbursement for conference attendance (Cook & Odom, 2013; E. P. O'Connor & Freeman, 2012). This approach, used at the school in this study, is reminiscent of the old adage, "Give a man a fish and you feed him for a day. Teach a man to fish and you feed him for a lifetime." Still, researchers have argued that the use of PD alone is not sufficient to guarantee the

sustainability of the educators' instructional practices (Cook & Odom, 2013; Pyle et al., 2011). Thus, Implementation Science has suggested that district or state financial support be ongoing for effective implementation to be successful and sustainable (Fixsen et al., 2013, 2005).

While some form of support for RTI implementation is essential, there is a lack of widespread agreement with respect to which administrative level should be primarily responsible for school reform initiatives (i.e., school, district, or state), since there must be sustainable and mutual trust, as well as faith between the leaders of the school reform (i.e., district, state, and nation) and those who are impacted by the implementation of these reform (i.e., educators and students) (Peck, 2016). A number of additional factors should be considered when structuring any school reform effort such as RTI, including racial, cultural, linguistic, and socioeconomic differences (Peck, 2016). As one GET in this study explained,

> I think that you feel like you're frustrated a lot because there are just so many things that just seem crazy out there, so many mandates and so many different things . . . I wish they [District and State] would kind of hear our cry of please let the insanity stop . . . These kids just maybe saw their mom get beat up last night, or they're not having enough to eat, or their electricity is off, or they don't know the language, or no one in their house knows the language enough to help them.

Among the many factors that can impact the success of any school reform is time. It can realistically take school reform initiatives such as RTI at least four to five years to realize their true potential (Brown & Spangler, 2006; Hornblower, 2005). Thus, supports at the higher level (i.e., district or state) need to remain in place for a certain amount of time in order for each school to implement school reform initiatives with fidelity and

sustainability and reach the intended goals (Fixsen et al., 2013, 2005; E. P. O'Connor & Freeman, 2012; Printy & Williams, 2015). How the amount of time interacts with particular school contexts is an important matter for future research.

Implications for Practice

In order for RTI to reach its alleged potential, the fidelity with which the six critical components of RTI are implemented should be monitored systematically and periodically, either by the school administration, or district personnel (Fuchs & Fuchs, 2007; see Figure 1 in Chapter II). The systematic assessment of fidelity of implementation can be accomplished by using valid, reliable, and appropriate tools relevant for all students, including ELLs (Escamilla, 2007; Getting Smart et al., 2016; Haager et al., 2010; Vaughn & Briggs, 2003). This point is particularly relevant in the case of the school studied in this research. Given the high proportion of ELLs at the school, it was important for fidelity measures to analyze the assessments and interventions with respect to reading comprehension, a key trouble spot for ELLs, either in the Tier placement or identification of disabilities (i.e., LD).

While the school rightly measured comprehension, a good thing, by neglecting to evaluate its reading interventions adequately, the school was left with little information for solving the problem of why students were achieving better in word identification than comprehension. By including fidelity of reading interventions in its measures, particularly as they related to ELLs, this study was able to shed important light on this matter. In sum, including the use of the ELLs' native language in the teaching and evaluation processes can provide more valid and reliable data regarding their true reading

skills, which would help to implement and evaluate the effectiveness of the implementation of RTI more accurately. This is important since 10% of the current student population in grades K-12 in U.S. public schools are ELLs and the percentage is expected to increase to 40% by 2030 (Getting Smart et al., 2016). Amazingly, the district considered the program studied here to be a model program, despite the fact that they had done little to institute measures of program quality.

Certainly more sufficient ongoing PD, as well as OST, is needed to help in-service educators obtain the knowledge and skills needed to accurately evaluate and interpret their students' performance and meet their specific needs. This is particularly true since the findings in this research revealed a decided lack of sufficient pre-service training in RTI at the university level (Barrio et al., 2015). A case in point is the kindergarten teachers, who, instead of being the linchpin of the entire RTI system required of them, lacked basic knowledge of the relationship between oral language development and reading that caused them to think that RTI was more appropriate for older readers. Thus, providing educators with sufficient ongoing PD, as well as OST, can help them to not only acquire needed skills, but also to change their attitudes and beliefs regarding the effectiveness of RTI, which in turn will improve the implementation of the overall program to reach the intended outcomes (Donnell & Gettinger, 2015; E. P. O'Connor & Freeman, 2012).

It is also clear from this study that schools such as the one studied here can benefit from applying Fixsen et al.'s seven core components of Implementation Science to their RTI projects to: (a) ensure that the program is implemented with fidelity and

sustainability; (b) achieve the expected outcomes; and (c) find gaps in the implementation process and take action to close these gaps as needed (Cook & Odom, 2013; Fixsen et al., 2013, 2005). As a part of this effort, districts need to make a more significant commitment to RTI implementation by having a team of RTI experts who are responsible for evaluating and promoting the implementation of RTI in each school, and providing the staff in each school with on-site supports in the form of answering any needed questions and taking action when needed (E. P. O'Connor & Freeman, 2012). Furthermore, school districts and states are ultimately the ones responsible for the success or failure of the implementation of RTI. This is due to the school program's dependence on their support, not only by providing PDs, OST, books, technology, and materials, but also by providing the ongoing financial support, supervision, and evaluation necessary to ensure effective implementation (E. P. O'Connor & Freeman, 2012; Fixsen et al., 2013).

Finally, there is a critical need for more clarity from districts and the state regarding guidelines and expectations for RTI implementation. The need for such guidance was reinforced in this study by the fact that the school principal tended to depend largely on his own understanding and interpretation of how to use RTI. While he was greatly respected by his staff, and knowledgeable about many aspects of RTI, it is clear that he would have benefitted from better district and state RTI guidelines (Printy & Williams, 2015). The need for better district and state guidelines was also evident in the comments of educators interviewed who worked at multiple schools such as the SLP and psychologist, who observed considerable variability in RTI implementation within the same school district (E. P. O'Connor & Freeman, 2012).

Implications for Future Research

The findings of this study have raised a number of issues related to Implementation Science that need to be addressed by future research. As revealed in this study, the staff selection component of Implementation Science is difficult to apply in educational settings. Future research should address questions related to the use of intact teaching staff to implement school reform. For example, how should the needs of intact staff members be assessed, and what types of initial PD and OST are most likely to lead to sustained fidelity of implementation?

The results revealed a critical need for better pre-service preparation for RTI. Yet, the extent to which RTI is currently covered in programs nationwide is unknown. There is a definite need to conduct more studies about teacher preparation programs at the university level including the extent to which they are covering RTI (i.e., coursework and field experiences), and in which departments (i.e., general or special education). Regarding the latter, issues related to the level of collaboration between SETs and GETs in higher education need to be examined in more depth and recommendations for increasing substantive interactions made. How can we expect GETs and SETs at the school level to interact effectively when their college professors are not?

Many schools such as the one in this study are struggling to implement RTI effectively (E. P. O'Connor & Freeman, 2012), the result being that in many cases nationwide the intended outcomes are not being achieved (Balu et al., 2015; E. P. O'Connor & Freeman, 2012). A key finding in this study was the notable lack of evaluation at both the staff and program levels. A lack of appropriate evaluation can lead

to programs that are unfocused and not producing the expected outcomes (E. P. O'Connor & Freeman, 2012). Future research needs to clarify questions related to the characteristics of effective and successful RTI programs and how these programs can be evaluated, whether by school districts or states.

To this end, future research needs to develop reliable, valid and easy to use methods of evaluating all the critical components of RTI programs. RTI evaluation instruments need to go beyond single student achievement outcome scores to take into account all of the components necessary to be an accomplished reader, while also providing a careful explication of the various roles educators, including teacher assistants, play within RTI, a complex system of educational decision making.

Future research should also consider questions related to the role of school administration in the effective implementation of RTI (Printy & Williams, 2015). For example, what kinds of supports are most effective in helping staff carry out RTI with a high level of fidelity? Given the reality that start-up funding will not last forever, what are cost-efficient ways of sustaining program change? What are realistic measures principals can use to monitor program fidelity while still carrying out their other daily duties?

It is clear that district, state, and federal support (i.e., system intervention) is a key factor to the success and sustainability of RTI implementation (Fixsen et al., 2013, 2005). Future research needs to clarify issues related to program sustainability by validating supports that school districts or states can provide for schools to support their RTI implementation. Also, what are evidence-based procedures for phasing out a grant, given

that it is unrealistic to expect the school to get additional funds forever? Based on the findings of this study, it is clear that two years is not enough.

The findings of this study indicated that there is a gap regarding the involvement of the community (i.e., parents) in the implementation of RTI. This is of concern given that authors such as Peck (2016) have included the community as an important partner in school reform. Future research should address questions such as what is the appropriate role of the community and parents in RTI?

Since the focus of this study was only on one school implementing RTI, there is a need for synthesizing research findings across studies to better understand characteristics of schools that are successful in RTI implementation. Further, it would be a mistake to conclude that the failure to attain robust student outcomes in RTI is solely due to a failure to implement the model with fidelity. Although many aspects of RTI are scientifically based, such as effective ways to implement the five components of reading (Bursuck & Damer, 2015; Hughes & Dexter, 2011), RTI as a program has yet to be validated as an EBP. Considerably more research needs to be conducted before that conclusion can be drawn.

Although RTI was introduced in the SES laws (i.e., IDEA, 2004) as an alternative/optional means to identify students with LD, having the potential to decrease the overall number of students referred to SES (Cortiella & Horowitz; 2014; Printy & Williams, 2015; Yell, 2012; Zirkel, 2011), it appears to have been used more generically as an early prevention model rather than a means for identifying students with LD (Balu et al., 2015; Cortiella & Horowitz; 2014). Because of this, the use of RTI as a means of

identification of students with LD has been relatively understudied (Daves & Walker 2012). Research on this topic is important, as there are risks involved in withholding SES from students as they progress through the Tiers. Important questions remain such as at what point should a student be referred? Which students benefit from going through the Tiers? What types of students are better served by referring them to SES right away?

Limitations

Many researchers have recommended that phenomenological studies be conducted at multiple sites with diverse participants using open-ended questions to better understand their lived experience of the phenomenon (i.e., implementation of RTI) (Creswell, 2013; Maxwell, 2013). However, this research was limited, not only by the availability of local schools who had implemented RTI for three years, but by the diversity of educators who had experienced RTI for this length of time. Also, the researcher relied on semi-structured interview questions in all interviews, which might have led participants to reveal data that they thought was relevant to the interview questions rather than describing the broader picture of their experience which might have occurred had they been asked open-ended questions (Creswell, 2013; Maxwell, 2013). In addition, the length of the interviews may have also worked to limit participant responding. Phenomenological research is mainly about the lived experiences of participants; however, since this study was part of a dissertation, the researcher had limited time to spend interviewing and observing participants. Therefore, the short time span of this study, as well as time constraints in educators' schedules may have had an impact on the results of the study (Creswell, 2013; Maxwell, 2013).

While the twelve educators interviewed were diverse in terms of their teaching experience; they were all white, ten of them were female, and all spoke English as their first language. In contrast, the majority of the students were Hispanic (i.e., 67%) and 40% of school population received ESL services. Researchers have recommended that participants in phenomenological studies be as diverse as possible in terms of race, ethnicity, gender, age, socioeconomic status, and length of experience. The lack of diversity in this sample could have limited the scope and depth of the phenomenon under investigation (Creswell, 2013; Maxwell, 2013).

Although all of the educators interviewed met the criteria for inclusion in the study in that they had been employed at the school during the entire period of implementation (i.e., three years), the participants were self-selected. Participants who self-select may choose to participate for reasons that could potentially bias the findings such as negative feelings towards the program being evaluated. Participants also agreed to participate by giving their signed consent form to the principal, who then passed it on to the researcher. Using the principal as the means of collecting consent forms could have caused the educators to be less than open about expressing their opinions to the researcher because of privacy concerns; they could have feared that their comments would get back to the principal.

Although the researcher used strategies to increase the trustworthiness of the study's findings (e.g., participant and peer checking, triangulation, numbers; Creswell, 2013; Maxwell, 2013), he was limited in his understanding of cultural phrases and school interactions because he was an international student who did not have experience

teaching in U.S. schools. This reduced understanding of American culture could have had an impact on both the data analysis and its interpretation.

The structure of the RTI program at this school involved providing Tier 3 outside of the general education setting by SETs, as well as having PLT weekly meeting attended by all GETs and led by CC/LC. The researcher was thus not able to observe the Tier 3 interventions or the interactions between multiple GETs at PLT meetings. Thus two key aspects of the RTI model were unable to be observed, limiting the fidelity of treatment results.

Another limitation relates to the student achievement data reported in the study. The DIBELS and TRC data for the middle of the year in the first two years of the program were not given to the researcher, so these data points could not be utilized. In addition, the researcher was unable to obtain end-of-the-year data for the third year of the program since the study was completed before the end of the school year. Thus, these factors potentially hindered the ability to accurately and fairly judge student performance.

Although the researcher randomly selected three GETs to be observed while they were implementing RTI in their classrooms (i.e., Tier 1, Tier 1+2, and Tier 2 intensive), all of the observations, either classroom or RTI team meeting observations, were anticipated by educators and scheduled in advance. This could have had an impact on the trustworthiness of the data, given that the educators' behavior could have changed due to the presence of the researcher. The same phenomenon could have also influenced observations of the RTI meetings (Keller-Margulis, 2012). The fact that the team extended the meeting to be on two consecutive days, rather than the usual weekly routine

meeting was a possible indicator that the researcher may not have been observing business as usual.

A potential benefit of RTI is that its prevention emphasis could lead to fewer referrals to special education, without sacrifice to student progress. Although seven educators indicated that the number of students referred to SES (i.e., LD) had noticeably decreased after the implementation of RTI, the researcher was not provided with concrete data to that effect, leaving unanswered, at least in this study, the question of the impact of RTI on issues related to the over-identification of students with LD.

Summary

By studying the implementation of RTI through the lens of the seven core components of Implementation Science, it is clear that the implementation of RTI was not consistent with the Implementation Science model in a number of ways. For example, staff selection was not conducted by selecting staff with knowledge, skills, background, and willingness to participate in the implementation of the program. A pre-existing group of teachers and other educators was used. Also, nine of the twelve educators interviewed revealed that they did not receive any pre-service training in their university program. Consultation and coaching (i.e., in-service training) was for the most part not provided as needed, and there was a lack of ongoing PDs and OST by the district RTI experts to help all educators implement the program effectively. Furthermore, there was a lack of formal evaluations, either for educators' roles, or the overall RTI program. Thus, program implementers were unable to identify gaps in the implementation process, as well as in the overall RTI program.

Two components of Implementation Science seemed to be consistently utilized. These components included administrative support (i.e., RTI leadership team and principal) and system intervention (i.e., district support). All twelve educators interviewed felt supported by school administration (e.g., principal) and had positive feelings toward the variety of supports they received from the principal who was perceived as knowledgeable and enthusiastic about RTI. Also, the school district selected this school as one of three schools in the district to receive federal grant money, funding that provided the school with all the needed financial support in the first two years of implementation. While the principal was perceived positively by his staff, he did not regularly collect data regarding the fidelity of implementation to ensure that the RTI program was implemented appropriately. Another problem was that the district struggled to maintain its level of support after the conclusion of the two-year federal grant. This reduction in support seemed to negatively impact the fidelity and sustainability of the program.

Although the overall average of the fidelity of the implementation of the interventions provided by all GETs was high (i.e., 81%), a closer look at the components related to ELL students (i.e., reading comprehension) revealed that fidelity was not high in all areas. Additionally, the overall student performance in reading on the most recent school report card (i.e., 2014-15) showed that 67.5% of students performed below their peers at other schools within the district based on EGTs, which largely measures comprehension. As with the EGT scores, the discrepancy in scores on the DIBELS and TRC was likely due to an intervention that failed to adequately focus on comprehension.

Additionally, seven educators stated that the implementation of RTI helped them to decrease the number of students referred to SES (i.e., LD). Unfortunately, no data were provided to validate this claim; nor were any data collected to examine the question of whether, as some critics claim, RTI delays service provision by requiring that students to go through the process of each Tier of RTI before referring them to SES. The data revealed that sustaining the future implementation of RTI at this school is at risk due to a reduction in district support for the project. Finally, the limitations of this research, along with its implications for current practice and future research were discussed.

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APPENDIX A

INTERVIEW PROTOCOL AND QUESTIONS

<table>
<tr><td colspan="4">Name:</td></tr>
<tr><td colspan="2">Title:</td><td colspan="2">School:</td></tr>
<tr><td>Grade taught:</td><td>Years teaching reading:</td><td>Years on an RTI team:</td><td>Years of teaching experience:</td></tr>
<tr><td colspan="4">Educational background (degrees earned):</td></tr>
<tr><td colspan="4">Area of teaching licensure:</td></tr>
<tr><td colspan="4">Are you National Board certified?</td></tr>
<tr><td>Gender:</td><td colspan="2">Ethnicity:</td><td>Native or first language:</td></tr>
<tr><td colspan="2">Location of interview:</td><td colspan="2">Date and time of interview:</td></tr>
<tr><td colspan="3">Signature:</td><td>Today’s date:</td></tr>
</table>

Research Questions	General & Special Education Teachers' Interview Questions
1) According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention? 2) To what extent is the school implementing RTI with fidelity and sustainability?	(1) Staff selection • How did you come to be involved in the RTI project at your school?
	(2) Pre-service training • What type of training did you receive in your undergraduate and/or graduate studies that prepared you for implementing RTI? How helpful was it? Please give some examples.
	(3) Consultation and coaching • What type of professional development did you receive from the school district prior to implementing RTI at your school? By whom? How helpful was it? • What type of ongoing support and training did you receive? By whom? How helpful was that consultation and coaching to your implementation of RTI?
	(4) Staff evaluation • How was your implementation of RTI evaluated? By whom? How helpful was this evaluation to you?
	(5) Program evaluation • How was your school's overall RTI program evaluated by the school district? State? • How did this evaluation affect how you implemented RTI in your classroom? • How did this evaluation affect how you implemented RTI as a school?
	(6) Facilitated administrative supports • What ongoing support did administration at your school provide that had an impact on your implementation of RTI? Please give some examples. How helpful was it?
	(7) System intervention • How did your school district assist you in implementing RTI? How helpful was it?

Research Questions	School Administrator's Interview Questions
1) According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention? 2) To what extent is the school implementing RTI with fidelity and sustainability?	(1) Staff selection • How did your school come to implement RTI? What was your role in getting it selected? Has this affected your hiring practices? If so, how? • What criteria did you use in selecting who would implement RTI at your school? Explain.
	(2) Pre-service training • How well do you think your teachers' pre-service and/or Master's training prepare them to implement RTI at your school? • What impact did your own educational experiences have on your ability to provide the leadership needed to implement RTI in your school?
	(3) Consultation and coaching • What professional development did you provide to your teachers to help them implement RTI? • What other ways did you support your teachers in implementing RTI? • What support did you receive from your district to aid you in implementing RTI in your school?
	(4) Staff evaluation • How did you evaluate your staff 's implementation of RTI? • What type of training/support were you offered about how to evaluate your teachers' implementation of RTI? How helpful was it?
	(5) Program evaluation • How has your district evaluated your RTI program? What were the results? How helpful was the evaluation to the implementation of RTI at your school? Has the state had any role in evaluating your RTI program?
	(6) Facilitated administrative supports • What ongoing support have you provided for your staff? How helpful do you think that support has been? Please give some examples.
	(7) System intervention • What type of support did your school district provide your school with in implementing RTI? Please give examples? How helpful was it?

Research Questions	School Psychologist's Interview Questions
1) According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention? 2) To what extent is the school implementing RTI with fidelity and sustainability?	(1) Staff selection • How did you come to be involved in the RTI project at your school?
	(2) Pre-service training • What type of training did you receive in your undergraduate and/or graduate studies that prepared you for implementing RTI? How helpful was it?
	(3) Consultation and coaching • What type of professional development did you receive from the school district prior to implementing RTI at your school? By whom? How helpful was it? • What type of ongoing support and training have you received? By whom? How helpful was it?
	(4) Staff evaluation • How was your role in implementing RTI evaluated? By whom? How helpful was this evaluation to you?
	(5) Program evaluation • How has your school's overall RTI program been evaluated by the school district? State? • How have these evaluations affected your role in implementing RTI in your school? • How did this evaluation affect how you implemented RTI as a school?
	(6) Facilitated administrative supports • What ongoing support has administration at your school provided for implementing RTI? How has it affected your role in implementing RTI at your school? The quality of your school's RTI program overall? Please give some examples.
	(7) System intervention • How did your school district assist you in implementing RTI? How helpful was it?

Research Questions	Speech Language Pathologist's Interview Questions
1) According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention? 2) To what extent is the school implementing RTI with fidelity and sustainability?	(1) Staff selection • How did you come to be involved in the RTI project at your school?
	(2) Pre-service training • What type of training did you receive in your undergraduate and/or graduate studies that prepared you for implementing RTI? How helpful was it?
	(3) Consultation and coaching • What type of professional development did you receive from the school district prior to implementing RTI at your school? By whom? How helpful was it? • What type of ongoing support and training have you received? By whom? How helpful was it?
	(4) Staff evaluation • How was your role in implementing RTI evaluated? By whom? How helpful was this evaluation to you?
	(5) Program evaluation • How has your school's overall RTI program been evaluated by the school district? State? • How have these evaluations affected your role in implementing RTI in your school? • How did this evaluation affect how you implemented RTI as a school?
	(6) Facilitated administrative supports • What ongoing support has administration at your school provided for implementing RTI? How has it affected your role in implementing RTI at your school? The quality of your school's RTI program overall? Please give some examples.
	(7) System intervention • How did your school district assist you in implementing RTI? How helpful was it?

Research Questions	Curriculum Coordinator/Reading Literacy Coach's Interview Questions
1) According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention? 2) To what extent is the school implementing RTI with fidelity and sustainability?	(1) Staff selection • How did you come to be involved in the RTI project at your school?
	(2) Pre-service training • What type of training did you receive in your undergraduate and/or graduate studies that prepared you for implementing RTI? How helpful was it?
	(3) Consultation and coaching • What type of professional development did you receive from the school district prior to implementing RTI at your school? By whom? How helpful was it? • What type of ongoing support and training have you received? By whom? How helpful was it?
	(4) Staff evaluation • How was your role in implementing RTI evaluated? By whom? How helpful was this evaluation to you?
	(5) Program evaluation • How has your school's overall RTI program been evaluated by the school district? State? • How have these evaluations affected your role in implementing RTI in your school? • How did this evaluation affect how you implemented RTI as a school?
	(6) Facilitated administrative supports • What ongoing support has administration at your school provided for implementing RTI? How has it affected your role in implementing RTI at your school? The quality of your school's RTI program overall? Please give some examples.
	(7) System intervention • How did your school district assist you in implementing RTI? How helpful was it?

Research Questions	School Counselor's Interview Questions
1) According to educators, to what extent did their school employ the principles of Implementation Science when implementing aspects of their RTI program, including: (a) staff selection, (b) pre-service training, (c) consultation and coaching, (d) staff evaluation, (e) program evaluation, (f) facilitated administrative supports, and (g) system intervention? 2) To what extent is the school implementing RTI with fidelity and sustainability?	(1) Staff selection • How did you come to be involved in the RTI project at your school?
	(2) Pre-service training • What type of training did you receive in your undergraduate and/or graduate studies that prepared you for implementing RTI? How helpful was it?
	(3) Consultation and coaching • What type of professional development did you receive from the school district prior to implementing RTI at your school? By whom? How helpful was it? • What type of ongoing support and training have you received? By whom? How helpful was it?
	(4) Staff evaluation • How was your role in implementing RTI evaluated? By whom? How helpful was this evaluation to you?
	(5) Program evaluation • How has your school's overall RTI program been evaluated by the school district? State? • How have these evaluations affected your role in implementing RTI in your school? • How did this evaluation affect how you implemented RTI as a school?
	(6) Facilitated administrative supports • What ongoing support has administration at your school provided for implementing RTI? How has it affected your role in implementing RTI at your school? The quality of your school's RTI program overall? Please give some examples.
	(7) System intervention • How did your school district assist you in implementing RTI? How helpful was it?

APPENDIX B

CLASSROOM OBSERVATION PROTOCOL—ADAPTED FROM VAUGHN AND BRIGGS (2003)

Date of Observation:	Grade Level:	School:
Observation Number:	Time Observation Began:	Time Observation Ended:
Location:	Teacher:	Observer:
Number of Students:	Topic(s):	
(1) Instructional Practice		
Items	*Field notes: What I see*	*Field notes: What I feel*
1-Models skills and strategies during lesson. [+] [-] [NA] 2-Makes relationships among concepts overt. [+] [-] [NA] 3-Emphasizes distinctive features of new concepts. [+] [-] [NA] 4-Providing prompts and cues in how to use strategies, skills, and concepts (e.g., guided practice, scaffolds, steps, procedures). [+] [-] [NA] 5-Teaches difficult vocabulary prior to lesson or during lesson as needed. [+] [-] [NA] 6-Achieves high level of response accuracy in context of lesson objectives (e.g., spelling accuracy on written assignment). [+] [-] [NA] 7-The quality of independent practice. [+] [-] [NA]		

(2) Interactive Teaching		
Items	*Field notes: What I see*	*Field notes: What I feel*
1-Secures and maintains student attention during lesson, as needed. [+] [-] [NA] 2-Gives feedback on academic performance. [+] [-] [NA] 3-Engages in ongoing monitoring of student understanding and performance during lesson. [+] [-] [NA] 4-Elicits responses from all students, including students have difficulty with the task at hands. [+] [-] [NA]		
(3) Adaptation for Individual Differences		
Items	*Field notes: What I see*	*Field notes: What I feel*
1-Modifies instruction for students as needed (e.g., breaks down tasks into smaller/simpler components). [+] [-] [NA] 2-Provides extra instruction, practice, or review for students' difficulty with the tasks at hand. [+] [-] [NA]		
(4) General Instructional Environment		
Items	*Field notes: What I see*	*Field notes: What I feel*
1-The extent to which students are on-task during literacy activities. [+] [-] [NA] 2-Length of literacy activities for most students. [+] [-] [NA] 3-Transitions between instructional activities. [+] [-] [NA]		

(5) English-Language Development		
Items	*Field notes: What I see*	*Field notes: What I feel*
1-Adjusts own use of English to make concepts comprehensible. [+] [-] [NA] 2-Uses visuals or manipulative to teach content. [+] [-] [NA] 3-Gives oral directions that are clear and appropriate For students' level of English-language development. [+] [-] [NA] 4-Structures opportunities for students to speak. [+] [-] [NA] 5-Selects and incorporates students' responses, Ideas, examples, and experiences into the lessons. [+] [-] [NA]		
(5) English-Language Development (continued)		
Items	*Field notes: What I see*	*Field notes: What I feel*
6-Provides explicit instruction of English language use and includes the use of cues and prompts. [+] [-] [NA] 7-Gives students time to respond to questions. [+] [-] [NA] 8-Encourages students to give elaborate responses. [+] [-] [NA] 9-Strategiclly use students' native language to help students understand content. [+] [-] [NA] 10-Uses gestures and facial expressions in teaching vocabulary and clarifying meaning of content. [+] [-] [NA]		

(6) Content Specific to Reading/Language Arts			
Items		*Field notes: What I see*	*Field notes: What I feel*
1-Providing systematic, explicit instruction in: a. Phonemic awareness. b. Letter-sound correspondence. c. Decoding. d. Vocabulary and vocabulary concept development. 2-Checks student comprehension of text by asking questions. 3-Engages student in meaningful interactions about text.	[+] [-] [NA] [+] [-] [NA] [+] [-] [NA] [+] [-] [NA] [+] [-] [NA] [+] [-] [NA]		

APPENDIX C

TEAM MEETING OBSERVATION FORM—ADAPTED FROM MARTIN ET AL. (2006)

<table>
<tr><td colspan="2">Location of meeting observation:</td><td>Date of meeting observation:</td></tr>
<tr><td colspan="2" rowspan="2">Purpose of the meeting:</td><td>Was there a meeting agenda? If yes, attach a copy.</td></tr>
<tr><td>Was it a standalone or back-to-back meeting?</td></tr>
<tr><td colspan="3">Who attended the meeting? List name and role. Take note of who was present for the entire meeting and who came in and out during the meeting.</td></tr>
<tr><td colspan="2">Who brought the meeting to order?</td><td>Who led the meeting?</td></tr>
<tr><td colspan="3">How long did the meeting last? List start/stop time, any breaks, and overall duration.</td></tr>
<tr><td colspan="3">What criteria used to determine students as unresponsive and move them between tiers?</td></tr>
<tr><td colspan="3">What criteria used to refer students to special education?</td></tr>
<tr><td colspan="3">What decisions were made? By whom? And based on what?</td></tr>
</table>

APPENDIX D

IRR OF CLASSROOM OBSERVATION DATA

Observation #: _____ GET #: ____Grade #: ___ Tier #: _____

# of Component	# of Items	Researcher	Colleague	% of IRR within each Component	% Overall IRR
1) Instructional Practice	(1)				
	(2)				
	(3)				
	(4)				
	(5)				
	(6)				
	(7)				
2) Interactive Teaching	(1)				
	(2)				
	(3)				
	(4)				
3) Adaptation for Individual Differences	(1)				
	(2)				
4) General Instruction Environment	(1)				
	(2)				
	(3)				

# of Component	# of Items	Researcher	Colleague	% of IRR within each Component	% Overall IRR
5) English-Language Development	(1)				
	(2)				
	(3)				
	(4)				
	(5)				
	(6)				
	(7)				
	(8)				
	(9)				
	(10)				
6) Content Specific to Reading/ Language Arts	(1)				
	(2)				
	(3)				
	(4)				
	(5)				
	(6)				